Considerations

RESPECTING THE

MANAGEMENT OF SIMPLE CONSTIPATION.

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THE untoward consequences of constipation are always considerable and sometimes serious; but greater than they—greater than the anæmia, the blood-poisoning, the headache, the nervousness, and the heart disorder which arise out of fæcal retention—are the untoward consequences of ignorant and unskilful domestic management.

For two days a patient has had no relief to the bowels. He has been travelling, or he has changed his diet, or his accustomed routine has been in some other way interrupted. The subject is seriously considered: in the light of an excited self-consciousness impending dangers are seen, and forthwith he determines to take "a dose." But the taking of doses is an inconvenient and a disagreeable procedure, and so it is settled that the dose shall be a good one—such a one as will speedily and effectually overcome the constipation and relieve the patient of his trouble. The dose is taken, the bowels (small, perhaps, as well as large) are emptied of their contents, the object of treatment has been achieved, and all for a time seems well. But the next day arrives, and there is no fresh movement of the bowels; even a second day passes, and they are still inactive. The patient is more uncomfortable than he was before he took his "dose." What is to be done? Matters cannot continue as they are. Plainly the medicine first employed has confined the bowels, and so another must be taken which shall be free from this disadvantage. The other is taken; again the bowels are freely moved, and a liquid, light-coloured, mucoid, and feculent discharge attests the success of the new endeavour. But the bowels fail to resume their periodical discharges; the patient becomes worse than ever; again he flies to artificial help for relief; again he is disappointed in recalling Nature to her own ways; and at last the bowels, robbed of their normal conditions of action and exhausted by frequent irritation, refuse to act at all except under the spur of strong aperients frequently repeated. With few exceptions, no person has passed through this experience and fallen under the tyranny of aperients without finding his life invaded by a pack of petty miseries which lower his health, vex his temper, and cripple his work. Now for the most part all these troublesome consequences of constipation may be avoided by attending to the conditions of healthy defecation. The chief of them requiring consideration at this time, and assuming the integrity of the nervo-muscular apparatus of the bowels, are plenty of solid and liquid digestible food, a fair amount of refuse matters in the colon, regard to the promptings of nature, daily solicitation at an appointed time, the co-operation of expectation and will, and contentment with a moderate discharge. I propose to discuss briefly each of these conditions.

1. Plenty of solid and fluid digestible food. People leading a sedentary or a society life become disposed to eat too fine foods, and to drink too little liquid. Among the results of such habits are a general want of nervo-muscular vigour, a deficiency of intestinal secretion, and an insufficient amount of refuse matter in the bowels to secure daily relief. To correct this without the help of drugs, coarse and irritating foods are taken. For a day or two perhaps they succeed; but after a time they provoke catarrhal irritation, and either increase the constipation or bring about lienteric diarrhœa. As a rule, it is a practical error to treat constipation by means of hard, indigestible, and irritating articles of food.

2. A moderately full colon is essential to the sufficient periodical discharge from the bowels. It is true that the ordinary peristaltic action of the bowels is automatic, and substantially independent of external stimulation; but it is, I think, equally true that for the stronger peristaltic action which, accompanied by inhibition of the associated lumbar centre and relaxation of the anal sphincter, issues in normal defecation, an external stimulus, the stimulus of an adequate amount of retained fæces, is necessary. If by an aperient or by any other means the colon is more or less completely emptied of its contents, defecation will be suspended until the colon becomes again more or less full; it cannot act independently of the appointed conditions of action; it cannot make bricks without straw.

3. Regard to the promptings of nature. When the lower part of the sigmoid flexure is full, sensory impulses are sent to the nervous centres, and these are responded to by discharges which not only excite vigorous peristalsis in the upper part of the colon and solicit the co-operation of the will, but tend to inhibit the lumbar centre and to bring about relaxation of the anal sphincter. The conditions of defecation are present, and it needs only a patient effort of will and concurrent expectation to originate and complete the operation. But when attention to these promptings of nature is denied they cease for the time; and although they recur and suffice for action, the denial, if often repeated, blunts the sensibilities of the parts concerned, deprives us of the normal intimations of the need for relief, and brings about a form of constipation difficult to cure.

4. Daily solicitation of nature at an appointed time. It has been found that for the great majority of people the most favourable, and also the most convenient, time for procuring relief to the bowels is after breakfast, and it is one of the greatest helps to sufficiency and regularity of action that the daily solicitation of nature should be practised at that time. In order that both solicitation and action should become developed into a habit, it is necessary that nature should not be listened to at any other than the appointed time. And in this precept there is no contradiction of the statement made in the previous paragraph; for it is not the temporary and exceptional denial of nature with the view of establishing a regular habit of defecation,—it is the repeated denial of nature with no such object in view which blunts the reflex sensibilities of the parts concerned and brings about an obstinate constipation.

5. The co-operation of expectation and will. Many persons seek relief to the bowels without taking any pains to secure success. With some persons, indeed, such pains are unnecessary. A certain automatism has been established; and it needs only time, place, and position to set it in successful motion. But in persons whose defecation is difficult, direct attention, expectation, and effort are essential, and when patiently practised seldom fail. The practice of slight alternate contraction and relaxation of the anal sphincter sometimes provokes exceptionally active peristalsis of the lower colon; and so, with concurrent effort, secures relief which could not otherwise be obtained.

6. Contentment with a moderate discharge. Ignorance of the average amount of fæces required for the daily healthy relief of the bowels is one of the main causes of constipation, the unnecessary use of aperients, and the evils that arise from both. For a man of average weight, consuming an average amount of food, the average amount of fæces ready for discharge in twenty-four hours is about five ounces. This should be formed, sufficiently aerated to float, and coherent. According as the cylinder is moist or dry it will measure from four to six inches in length. Now, many people expect to have a much more abundant discharge, and are dissatisfied or anxious if they do not get it. They complain of their insufficient relief, and take aperients to make it larger. For a day or two larger discharges are procured, but then, when the reserves of fæces are removed and the colon is empty, and the conditions of defecation no longer exist, more or less complete inaction of the bowels ensues, constipation (as it is here erroneously called) becomes confirmed, new and stronger aperients are had recourse to, and at last the patient falls into a pitiable condition of physical suffering and moral wretchedness. And from this condition there is no escape except through the complete suspension of aperients, the renewal of obedience to physiological laws, and a courageous patience in waiting upon Nature.

I will conclude these imperfect remarks by putting down as briefly as possible the instructions which I ask my pupils to give to their patients for the management of simple constipation:—1. On first waking in the morning, and also on going to bed at night, sip slowly from a quarter to half a pint of water, cold or hot. 2. On rising, take a cold or tepid sponge bath, followed by a brisk general toweling.

3. Clothe warmly and loosely; see that there is no constriction about the waist. 4. Take three simple but liberal meals daily; and, if desired, and it does not disagree, take also a slice of bread-and-butter and a cup of tea in the afternoon. When tea is used it should not be hot or strong, or infused over five minutes. Avoid pickles, spices, curries, salted or otherwise preserved provisions, pies, pastry, cheese, jams, dried fruits, nuts, all coarse, hard, and indigestible foods taken with a view of moving the bowels, strong tea, and much hot liquid of any kind, with meals. 5. Walk at least half an hour twice daily. 6. Avoid sitting and working long in such a position as will compress or constrict the bowels. 7. Solicit the action of the bowels every day after breakfast, and be patient in soliciting. If you fail in procuring relief one day, wait until the following day, when you will renew the solicitation at the appointed time. And if you fail the second day, you may, continuing the daily solicitation, wait until the fourth day, when assistance should be taken. The simplest and best will be a small enema of equal parts of olive oil and water. The action of this injection will be greatly helped by taking it with the hips raised, and by previously anointing the anus and the lower part of the rectum with vaseline or with oil. 8. If by the use of all these means you fail in establishing the habit of daily or of alternate daily action of the bowels, it may be necessary to take artificial help. And your object in doing this is not to produce a very copious dejection, or to provoke several smaller actions; your object is to coax or persuade the bowels to act after the manner of nature by the production of a moderate more or less solid formed discharge. Before having recourse to drugs, you may try, on waking in the morning, massage of the abdomen, practised from right to left along the course of the colon; and you may take at the two greater meals of the day a dessertspoonful or more of the best Lucca oil. It is rather a pleasant addition to potatoes or to green vegetables. 9. If the use of drugs is unavoidable, try the aloin pill. Take one half an hour before the last meal of the day, or just so much of one as will suffice to move the bowels in a natural way the next day after breakfast. If it should produce a very copious motion, or several small motions, the pill is not acting aright; only a fourth, or even less, should be taken for a dose. When the right dose has been found it may be taken daily, or on alternate days, until the habit of daily defecation is established. Then the dose of the pill should be slowly diminished, and eventually artificial help should be withdrawn. The aloin pill is thus composed: ℞ Aloinæ, ½ gr.; extr. nucis vom., ½ gr.; ferri sulph., ½ gr.; pulv. myrrhæ, ½ gr.; saponis, ½ gr.; fiat pil. 1. If the fæces are dry and hard, and *if there is no special weakness of the heart*, half a grain of ipecacuan may be added to each pill. Should the action of the pill be preceded by griping and the character of the action be unequal, half a grain of fresh extract of belladonna will probably remove these disadvantages. If the aloin pill gripes, provokes the discharge of much mucus, or otherwise disagrees, substitute the fluid extract of cascara sagrada, and take from five to twenty drops in an ounce of water either on retiring to bed or before dinner. And when neither aloin nor cascara agrees, you may succeed by taking before the mid-day meal two or three grains each of dried carbonate of soda and powdered rhubarb.

The exact agent employed for the relief of constipation is of much less importance than its mode of operation. If, whatever the agent may be, it succeeds in producing after the manner of nature one moderate formed stool, it may be, if necessary, continued indefinitely without fear of injurious effects. But, treated upon physiological considerations, I have the belief that in the great majority of cases simple constipation may be successfully overcome without recourse to aperients.

GLASGOW SICK POOR AND PRIVATE NURSING ASSOCIATION.—The eleventh annual meeting of the supporters of this Association was held on the 24th ult., when it was reported that exclusive of midwifery cases the number of patients attended during the past year was 1621. The number of midwifery patients attended was 1433 and nurses had been engaged by 366 private families. The total ordinary expenditure for the year was £4040, the ordinary receipts amounting to £3371. Donations and legacies amounted to £307, and a balance of £635 is now due to the bank.

A Lecture
ON THE
SENSE OF HEARING.

Delivered before the British Association at Birmingham on September 6th, 1886,

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MR. PRESIDENT, LADIES, AND GENTLEMEN,—I am privileged this evening to address you on a subject that lies in the borderland between the realm of physics and that of consciousness. Our sense organs are the portals whereby the movements of the world around us find an entrance to our minds. We are so accustomed to the inflow of impressions through these organs; we are so familiar with light and darkness, with sunshine and shadow, with the colours and forms of objects; we are so accustomed to hear a multitude of sounds, and to readily apprehend the various meanings attached to them by our minds—that we constantly forget that but for the eye the world would be in darkness, and but for the ear nature would be silent.

That mode of motion which we term Light does not dispel the darkness until it falls on a living eye. That other mode of motion which we term Sound does not break the silence of nature until it enters a living ear. It is difficult to estimate how much we owe to the sense of sight for a revelation of the secrets of nature. It is still more difficult to form any just conception of what we owe to the sense of hearing. Far down in the scale of life, in long ages that are past, the first rudiment of an ear was developed; through its agency the vibrations of sound were enabled to influence the nervous system, and there to produce sound-sensations. As time went on, the organ became more highly developed, and no doubt more refined in its power of receiving and transmitting sound-impressions. At first there was no organ whereby the animal could produce sound as a mode of expression. But when an organ for sound-production was evolved, and when the animal became able to use that organ in suitable response to its various sensations of sound, the highest phase of brain action became possible. It needed only the higher development of the intellectual operations of the brain to make the perception of the different sound-sensations sufficiently refined to render possible the invention of language, with its manifold meanings and wonderful results. And at last it has come about, so closely are the impressions of sound associated with our mental operations, that we *think* in unspoken words.

I desire this evening to direct your attention specially to the sense of hearing—a subject full of interest, but at the same time so full of difficulty that I shall have to be careful lest I involve you in a maze of complex detail and baffle your perception of the main points. Those of you who have studied acoustics will have no difficulty in following my discourse. Therefore, I trust they will allow me to endeavour to carry with us those who may not be in a position so advantageous.

NATURE OF SOUND.

Let us in the first place attend to the nature of the physical agent that stimulates the organ of hearing. Strictly speaking, sound is a sensation produced in the brain by the activity of its nervous mechanism. But for convenience the term Sound is commonly applied to that mode of motion which enters our ears and throws the hearing apparatus into action. I shall use the word in that sense, and employ the term Sound-Sensation to indicate that state of consciousness which consists in hearing a sound. Sound is a wave motion, and therefore consists in vibration. Every sounding body is in a state of vibration. The vibration may be *simple* or *compound* in its nature, and it will be necessary for me at the outset to explain what is meant by simple and compound vibrations, otherwise you cannot understand the sense of hearing.

Simple Sound-Vibrations.—The motion of a pendulum is a familiar example of the sort of vibration that produces sound. The pendulum oscillates to and fro. When it swings from one side to the other and back again, it makes one

complete vibration. Its vibrations are repeated again and again in exactly the same period of time—they are *periodic*. The number of vibrations that occur in a unit of time—say in a minute—indicates the *frequency of vibration*. I can readily change the frequency of vibration by altering the length of the pendulum. If I shorten it, it vibrates more rapidly. The shorter I make it, the greater is the frequency of its oscillation. Observe that I can make the vibrations large or small without altering their period. If I throw the pendulum into motion with a gentle touch the *amplitude* of its vibration is small; if I use a greater force the amplitude of vibration is increased. But in both cases the frequency of vibration is the same. Every simple musical tone is due to simple pendulum-like vibrations of the air or other elastic medium. The *pitch* of the tone depends on *frequency*, its *loudness* depends on *amplitude*, of vibration. When a tuning-fork is thrown into motion, its elastic limbs oscillate to and fro like a pendulum, and throw the surrounding air into the invisible waves of sound. The molecules of the air oscillate forwards and backwards in the same period as the fork. When the two limbs fly apart they give a blow to the surrounding air that condenses it. When they swing towards each other the air is rarefied. And so the air is thrown into a series of concentric waves that continually expand, and gradually fade away as they travel to a distance. Each wave consists of a layer of condensed and one of rarefied air. You hear that the tuning-fork gives a musical tone. For the production of a musical tone two things are essential: 1. The vibrations must be strictly periodic; if they are not so, the result is not a musical tone, but a noise. 2. The vibrations must be sufficiently frequent. The fork which I have sounded gives 130½ vibrations in a second. The pitch of the tone is C in the bass clef. You cannot distinguish its individual vibrations; they are too rapid. But if a fork be made so long that it vibrates less frequently than sixteen times per second, one hears the pulses of sound separate and distinct. When the frequency of vibration is raised to sixteen per second, and still more clearly when it is raised to thirty or forty per second, the separate sensation due to each vibration lasts until the next appears, and so the sensation becomes continuous and the individual vibrations are no longer perceived. The pitch of a tone entirely depends on frequency of vibration. A very sensitive ear can distinguish an immense number of tones, varying from sixteen up to as many as 40,000 vibrations per second. In some persons the ear is so sensitive to frequency of vibration that in tones of ordinary pitch a difference of half a vibration in a second gives rise to a sensible difference in the sound-sensation. When a tuning-fork is properly sounded, its vibrations are simple, like those of a pendulum, and therefore produce a simple tone. The tone appears of lower pitch than is really the case, because no harmonics are present. If I attach a piece of brass-foil to the end of one of the limbs of the fork and place it in contact with a revolving cylinder covered with smoked paper, its vibrations are recorded and produce a wavy line similar to a vertical section of the surface of water in a state of wave motion. I have made an enlarged copy of one of the vibrations, and you see that it is a smooth curve, produced equally on both sides of an imaginary line of equilibrium, termed an abscissa. That is, then, the curve of a simple vibration.

Compound Sound-Vibrations.—Let us now attend to compound sound vibration. I sound two tuning-forks, the second of which vibrates twice as rapidly as the first. You hear two tones, and you recognise the second to be an octave above the first. We have a double sensation, evidently due to two sets of simple vibrations differing in frequency. Now, do the two sets of simple vibrations enter the ear? No, they are compounded into one vibration. You see from the drawing that when the two sets of vibrations are placed one upon another, the phases of movement are repeatedly in the opposite direction. But, as it is impossible for the same molecule of air to move in opposite directions at the same moment, the two vibrations must be compounded into one. When the two vibrations are in the same phase of movement they are added together, and the extent of the motion increased. On the other hand, when they are in the opposite phase they interfere with each, so that the resulting difference of motion has to be taken. The result is a vibration that differs in *form* from both of its constituent vibrations. It is still strictly periodic, but no longer pendular in form. Within the organ of hearing a compound vibration of that form produces an effect the same as if its two constituent simple vibrations acted independently. Now, suppose we take three forks with frequencies of vibrations in the relative proportion of 1, 2, 3. I sound them all at once, and again you hear a complex sound consisting of a fundamental tone with the octave above it, and with the fifth note of the scale above the second octave. The compound vibration differs in form from that of the previous case, and it produces a sensation of three tones, just as if the three sets of simple vibrations reached the ear independently. Suppose we were to take, say, eight tuning forks, having frequencies of vibration in the simple arithmetical relation of 1, 2, 3, 4, 5, 6, 7, 8. If we sounded them all at the same time we should get the highly complex vibration which I show you. The organ of hearing would treat that complex vibration as if it consisted of eight distinct series of simple vibrations. Eight different tones could be distinguished by a practised ear, and indeed by most ears if aided by resonators. Infinitely more complex are the vibrations produced by an orchestra with a chorus of human voices and solo singers associated. The mind fails in its effort to grasp the wave form of the flood of complex vibrations that pours into the ear at every moment. The highest and lowest tones are heard; the qualities of the notes produced by the strings, the wind instruments, and the voice are all discernible. The theory offered by Helmholtz in explanation of this wonderful property of the sense of hearing is that the terminations of the nerves in our ears can analyse complex vibrations. As they are supposed to do this by what is known as sympathetic vibration, I must explain what is meant by that term.

Sympathetic Vibration.—1. Of a tuning-fork: If I throw the air about a tuning-fork into vibrations of the same frequency as those which the fork can produce, the fork is thrown into feeble vibration. But it does not vibrate if the neighbouring tone has a higher or lower pitch than its own. 2. Of a string: If you lift the dampers from the strings of a piano by pressing down the loud pedal, and sound a note having the pitch of one of the strings, that string is thrown into sympathetic vibration and gives quite an audible note. If you produce a complex vibration with a number of tones having exactly the same pitch as some of the piano strings, they would analyse the compound vibration, and treat it as if it consisted of a distinct series of simple pendular vibrations, so that we should hear the piano strings giving forth notes of the same pitch as those which produced the compound vibration. A piano is better adapted than any other stringed instrument for doing this experiment, because of its large sounding box, which readily takes up the vibrations and communicates them to the strings. It is maintained by Helmholtz and others that in the ear every audible tone throws into sympathetic vibration one or more of the nerve terminations, and that all complex tones are analysed by them into simple pendular vibrations, which affect different nerve terminations according to their frequency of vibration. I shall presently show you reasons for doubting that theory.

THE ORGAN OF HEARING.

There is a general scheme applicable to all animals.

1. There is a *peripheral mechanism* to receive the sound vibrations and transform them into nerve impulses. In all animals that can hear, this peripheral apparatus consists of a modification of the epidermic cells that cover the integument. Each cell is a nucleated mass of protoplasm that has undergone some profound change whereby it has acquired the power of transforming sound vibrations into nerve impulses. The inner end of each of these auditory cells is connected with a nerve fibre, and from its outer free end there project one or more short, stiff, hair-like processes, termed Auditory Hairs. The hairs project into a watery fluid in the innermost part of the ear. The sound wave penetrates the fluid and causes the hairs to tremble. The sound vibrations caught up by the hairs pass into the auditory cells, and there, by some unknown mechanism, are transformed into nerve impulses.

2. The second part of the mechanism consists of nerve fibres that conduct the nerve impulses to the brain of a vertebrate, or to the cephalic ganglia of an invertebrate, animal.

3. The third part consists of sensory nerve cells in the brain, which are thrown into action by the arrival of impulses along the auditory nerve, and give rise to that state of consciousness termed Sensation. The position of

the centre for sound-sensation is definitely known in the ape's brain. Destruction of it on both sides of the brain produces total deafness. These three parts constitute the sensory mechanism for sound-sensation.

4. But we must add to this sensory mechanism other nerve cells in the brain concerned in perception—an intellectual act far higher than mere sensation, whereby the consciousness examines the various sensations of sound, and attaches to them various significations, with which they are afterwards associated. The centre for perception is probably placed in the front part of the brain.

FURTHER DETAILS REGARDING THE PERIPHERAL MECHANISM.

I must now state some further details regarding the peripheral mechanism of the organ of hearing.

The Invertebrate Ear.—A hearing apparatus is found in the Medusæ, and in all animals above them. Stated briefly, its most general condition is that of a minute sac with a membranous wall. The sac is full of fluid, and lined by a layer of ectodermic cells, some of them modified into hair cells. The auditory hairs may project free into the fluid, but that is rare. Most commonly they project into a calcareous mass, termed an Otolith or Earstone. The otolith consists of about 75 per cent. of lime salts in the form of grains or crystals, held together by a small amount of mucous jelly. The effect of the otolith is not well understood. It has been thought that the hard calcareous particles may rattle against the hairs, like the shingle on the sea beach when the wave breaks over it. If that be so, we may reasonably suppose that the periodic vibrations of a musical tone must be changed into indefinite vibrations, and produce nothing but noise. It may be, however, that there is no rattling of the particles, and that the otolith and hairs move to and fro as one mass when the sound wave reaches them. If that be so, the mechanism is probably not advantageous for the hearing of faint sounds, because it is difficult to throw a heavy mass into movement. Otolith sacs are found in the ear of every vertebrate, but when in the vertebrate series the ear becomes an organ for the delicate appreciation of musical sounds there is a great development of hair cells without any otolith in connexion with them.

The Vertebrate Ear.—Let us turn to the structure of the ear in the vertebrate series of animals. In the lowest group of fishes the otolith sac has in connexion with it a membranous semicircular canal, with a swelling at each end of it containing hair cells with nerves passing to them. In the higher fishes, and in all other vertebrates, three semicircular canals are developed in each ear. Each canal has a swelling at one end of it containing hair cells without any otolith. These canals are nearly always placed in the planes of a cube—that is to say, in the three dimensions of space,—and are now supposed to be peripheral organs, not of the sense of hearing, but of a sense that renders us acquainted with the movements of the head, and so helps us to maintain the equilibrium of the body. The otolith sac becomes divided into two: one termed the Utricle, connected with the semicircular canals; the other termed the Saccule, from which a single membranous canal, the cochlear canal, becomes developed in reptiles, birds, and most of all in mammals. In reptiles and birds it is short and nearly straight. In mammals it is much longer, and coiled up like a snail's shell. Hence the term Cochlea. The cochlear canal contains an immense number of hair cells, with a multitude of nerve fibres passing to them. The membranous sacs and canals that I have mentioned constitute the membranous labyrinth, and are found in the innermost part of the ear. They are all filled by a watery fluid, and nearly surrounded by another watery fluid enclosed in the bony labyrinth. The sound waves are conveyed to the outer fluid of the labyrinth. They then pass through the membranous walls of the otolith sacs and the cochlear canal into the fluid within them, from which they are caught up by the hair cells.

Much as I should like to indicate to you the structure and action of the beautiful mechanism by which sound is conducted to the labyrinth, the shortness of the time at my disposal compels me to limit your attention to the cochlear canal which contains the hair cells that enable us to appreciate musical sounds. It is a canal of somewhat triangular shape when cut across. Two sides of the triangle are bounded by thin membranes that are traversed by the sound waves. The chief of these two membranes is termed the Basilar Membrane. It is composed of fibres of connective tissue, that stretch across the general cavity of the cochlea, and are continuous at both ends with the periosteum that lines it. The membrane somewhat resembles a slender suspension-bridge stretching across a ravine. This cochlear suspension-bridge, if I may so term it, extends through the whole length of the cochlea in mammals, but in birds it is wanting at the upper or closed end of the tube. It is covered on both surfaces by epithelial cells. Very many of those on the upper surface are hair cells, with ordinary or somewhat modified epithelial cells placed between them to support them in their places. There is an immense number of these hair cells. In the cochlea of the cat four rows of them run the whole length of the cochlear canal. In the human subject there are five or six rows of them, and the total number of the cells is estimated at about 15,000. These hair cells of the cochlea seem placed in a position of advantage, inasmuch as they are supported on a membrane that can vibrate with the sound wave. It is otherwise with the hair cells of the otolith sacs. They are planted on a membrane that is fixed in the periosteum lining the bony wall of the labyrinth. Immediately over the free ends of the hair cells there is a thin covering membrane, the use of which it is difficult to comprehend. During life it is probably soft, but when the soft parts of the cochlea have been hardened to permit of thin slices being made for microscopical observation, the membrane has a laminated appearance, with a distinct bem at its lower surface. In other respects it is homogeneous. One margin of it is always firmly attached to the periosteum at the inner angle of the cochlear canal. The other margin is usually free and turned up like a scroll. But it may be that, in a cochlea which has not been injured by slicing it with a knife, the outer margin dips down, and is attached to the supporting cells outside the hair cells. It is also difficult to say what may be the relation of this covering membrane to the hairs of the auditory cells. It is not definitely known whether the ends of the hairs are free, or touch the covering membrane, or project into it. I have never seen them projecting into it, nor have I seen any hairs torn off and adhering to the membrane. It must be admitted that the function of the covering membrane is quite obscure, and must remain so until we know its precise position with reference to the hairs. It has been suggested that its function is to damp the vibrations of the hairs, and so prevent their vibrating too long. But it may be supposed that structures so excessively short as these hairs need no damping apparatus. However that may be, the sound-wave comes into the cochlear canal on the side of this covering membrane, and travels through it to reach the auditory hairs.

THE ACTION OF THE COCHLEA.

I have now, in the last place, to criticise the present accepted theory of the action of the cochlea in the reception of sound, to point out its shortcomings, and to offer for your consideration a new theory. Helmholtz, in his great work on the "Sensations of Tone," supports the theory that the nerve terminations in the cochlea are affected by sound, on the principle of sympathetic vibration; that is to say, there is a finely graduated series of nerve terminations that individually respond to tones of a pitch varying from sixteen to many thousands of vibrations in a second. That theory is based on the analogy of the sympathetic vibration of tuning-forks and strings. No doubt it has been shown by Professor Hensen of Kiel that the free auditory hairs of some crustaceans vary in length, and that when he sounded different notes with a horn some hairs vibrated more than others to particular notes; he admits, however, that when he sounded any note very loudly all the hairs vibrated. But when we turn to the cochlear hair cells, especially those of mammals, we find that the hairs are all nearly of the same length and all exceedingly short. It would take from 120 to 220 of them placed end to end to make the breadth of one millimetre. The shaft of an ordinary pin is just about the breadth of a millimetre. The hairs are therefore exceedingly short, and their variation in length so trivial that no one has ever suggested that the different hairs can be expected to make a selective response to sounds of different pitch. But in all animals auditory hairs are the recipients of sound vibrations. In the organ of taste also, delicate hairs at the free ends of epithelial cells are the parts impressed by molecular motion. Why, then, is the theory still maintained, although the condition of the auditory hairs gives no countenance to it? Hensen has endeavoured to show that, as the fibres of the basilar membrane slightly increase in length from the

base to the apex of the cochlea, they answer the conditions required for the sympathetic responses to tones of different pitch. But the fibres are at most very short, and their variation in length very slight. They vary from one-fifth to rather more than a third of a millimetre—that is to say, it would take from three to five of them put end to end to make the breadth of a common pin; and yet within the limits of dimensions so minute we are expected to find a series of vibrating bodies that with unfailing precision select particular vibrations, varying from 16 to 40,000 in a second. But the fibres of the basilar membrane are regarded by no one as the terminations of nerves, and although an attempt has been made to show how the vibrations of certain fibres may be communicated to certain hair cells, the explanation is so far-fetched that I need not trouble you with it. I am convinced that this theory of sound analysis in the cochlea, or in any other part of the peripheral mechanism of the ear, must be abandoned. But even supposing the theory a feasible one, see what would be the result of its acceptance. Imagine a great number of sensory nerve cells, all in a row, for the sake of simplicity, with a nerve fibre going from each one of them to a hair cell in the cochlea. A tone of say 100 vibrations per second arrives at the hair cells and stimulates its particular cell. Its nerve is then stimulated. A particular sensory cell is in turn excited, and we hear a tone of a low pitch. On this theory, the pitch of the tone we hear is not due to 100 impulses per second coming along the nerve to the sensory cell. Not at all; that is no part of the theory. It is the excitement of a particular nerve cell or group of cells that is supposed to give the sensation of this particular tone. Suppose a tone of 101 vibrations per second entering the ear: we have the sensation of a tone of higher pitch than the other. On this theory, the sensation of this higher tone is supposed to be due to the stimulation of another sensory nerve cell. So that for every different sensation of pitch, even although the exciting cause differ only by one, or even half a vibration, there must be a different sensory cell in the brain to give it.

Let us see how the theory of *concord* and *discord* fares on this theory. I sound two organ pipes tuned to give the same note. You hear an even flow of sound. I throw them out of tune by causing the one to vibrate a little more rapidly than the other. The even flow of sound is lost, and you hear a harsh discord due to alternate risings and fallings in the loudness of the sound—commonly termed Beats. The beats result from the action of the two sets of sound waves upon each other. Suppose we have two sets of waves started at the same moment, one having the frequency of 100, the other of 101 per second. The crests, so to speak, of the two sets of waves will coincide only once in a second, and give a flash of sound. At all other periods in the second the two sets of waves interfere with each other and diminish the sound; therefore once every second the loudness of the sound would rise from a minimum to a maximum, fall again to a minimum, and so produce one beat per second. The absence of beats is essential for the concord of sound. If I sound three forks whose vibrations are in the proportion of 4, 5, 6, we get the common chord of Do, Mi, Sol in the major mode. We recognise these three tones individually; yet they blend, and the compound vibration flows smoothly on without beats, and is therefore harmonious and agreeable. It is admitted that this agreeable sensation of harmony is entirely due to the relative numbers of the vibrations. Its cause is strictly physical and mathematically precise.

But see what is supposed to happen in the organ of hearing on the theory I am criticising. The complex vibration is supposed to be analysed in the ear and the vibrations of Do, Mi, Sol are caught up by at least three different fibres of the basilar membrane and transferred to at least three different hair cells. The nerve impulses are sent along at least three nerve fibres to the brain, and at least three sensory cells are excited there, and so give the three sensations of Do, Mi, Sol. But the three sensations are blended into the compound sensation of a harmony. How and where can they blend? No doubt the sensory cells send their impulses to the common centre for perception, and we can imagine the blending taking place there. *But if the motions in the three sensory nerve cells are eventually to be blended, it seems unnecessary that the already blended sound-vibrations should have been analysed in the cochlea.* And if the sensation of a harmony so clearly depends on the relative number of vibrations, it seems necessary to suppose that in the three sets of nerve fibres there are vibrations of nerve molecules at frequencies in the proportion of 4, 5, 6, and that these pass to the sensorium, and are eventually blended into a harmonious sensation. If this be not so, then we have really received no explanation of the *physiological causes* of harmony and discord.

This theory of sound-sensation, then, is so full of difficulty when applied to the peripheral mechanism in the ear, and so unsatisfactory when we pursue it into the brain, and it seems so hopeless to adapt it to the facts, that I think it must be abandoned. But before I propose another theory, I would pay a humble but sincere tribute to the genius of Helmholtz. His magnificent services to science have long since placed his name amongst those of the immortals. His theory of sound-sensation may be faulty, but that can never tarnish the splendour of his many wonderful contributions to the progress of scientific knowledge.

A NEW THEORY OF THE SENSE OF HEARING.

Some five years ago it struck me that the case of the telephone may throw light on these difficulties regarding the sense of hearing. In the telephone there is a thin plate of iron placed near the end of a permanent steel magnet. A bobbin of thin copper wire is coiled round the end of the magnet nearest the plate, and is connected with a bobbin of wire around the magnet of a second telephone in every respect similar to the first. When sound-waves fall on the plate of the transmitting telephone it vibrates. The vibrations of the iron near the magnet affect the magnetism, and so induce in the wire currents of electricity whose frequency and amplitude correspond to those of the vibrations of the iron plate induced by the sound. The currents travel to the receiving telephone and induce oscillations of its magnetism, which in turn cause its iron plate to vibrate and produce sounds similar to those communicated to the first telephone. There is no analysis of the sound-waves. The transmitting telephone takes up simple or complex vibrations. The harmonies of an orchestra may fall upon it, and it does not fail to convert the complex sound-vibrations into electrical vibrations, and these again into the complex sound of the orchestra in the receiving telephone. It is, indeed, one of the most wonderful inventions of recent times. Can it throw light on the sense of hearing?

The theory which I have to propose may be termed the Telephone Theory of the Sense of Hearing. The theory is that the cochlea does not act on the principle of sympathetic vibration, but that the hairs of all its auditory cells vibrate to every tone, just as the drum of the ear does; that there is no analysis of complex vibrations in the cochlea or elsewhere in the peripheral mechanism of the ear; that the hair cells transform sound-vibrations into nerve-vibrations similar in frequency and amplitude to the sound-vibrations; that simple and complex vibrations of nerve-molecules arrive in the sensory cells of the brain, and there produce, not sound again of course, but the sensations of sound, the nature of which depends not upon the stimulation of different sensory cells, but on the frequency, amplitude, and form of the vibrations coming into the cells, probably through all the fibres of the auditory nerve. On such a theory the physical cause of harmony and discord is carried into the brain, and the mathematical principles of acoustics find an entrance into the obscure region of consciousness. Now if nerve energy were only electricity, that theory would probably be accepted at once. But nerve motion is very sluggish when compared with electricity.

I have kept this theory back for five years, because I felt I had no evidence of the possibility of sending a rapid succession of vibrations along a nerve. It cost me a good deal of thought and experimental observation to find the evidence I required. If we give to a motor nerve of a frog or rabbit ten instantaneous shocks of induced electricity in a second, ten impulses will pass along the nerve to the muscle, and produce ten distinct contractions in the same period. If we send forty impulses along the nerve, we get, not forty contractions of the muscle, but a single continuous contraction, because the several contractions are fused together. Now, if we listen to the muscle so stimulated, we hear a musical note having the pitch of forty vibrations per second. Each sound-vibration results from the sudden shock of chemical discharge due to the arrival of each nerve impulse in the muscular substance. If we stimulate the nerve, say, 200 times per second, by causing a tuning-fork to make and break the primary circuit of an induction machine, and so send 200 shocks per

second into the nerve, the pitch of the note in the muscle exactly corresponds. It has the same pitch as the fork. I experimented in this way, and eventually found that I could send as many as 352 impulses per second along the nerve of a rabbit and get a note from the muscle of the pitch of 352 vibrations per second—that is, a note of the pitch of F in the lowest space of the treble clef. But when I tried by more rapid stimulation of the nerve to get a higher note from the muscle, I failed; there was nothing but a noise heard. That a low rumbling sound is produced by a contracting muscle is known to every physiologist. You can hear it if you firmly clench the jaws during the stillness of night, when other sounds are hushed. It is a sound of very low pitch due to vibrations certainly below 40—perhaps not more than 10 or 12 per second. There is therefore nothing new in my statement that a note may be heard in a muscle; the new point is that the pitch of the note may be increased by a more rapid stimulation of the nerve, and that as many as 352 impulses may be sent along a nerve and retain their individuality so sharply that they can produce a note in a muscle having a pitch number of 352. That fact will give support to a vibrational theory of nerve energy.

Now, am I to conclude that, because I failed to get a higher note than one of 352 vibrations from the muscle, it is not possible to send more than 352 vibrations per second along a nerve? By no means; the fibres of a muscle are very different from those of a nerve, and also very different from nerve cells. The molecules in both of them can probably vibrate far more rapidly than 352 times per second.

I have therefore directly proved that vibrations of the same frequency as all the lower tones of the scale, from the lower F of the treble clef downwards, can be transmitted by a nerve. A short time ago it occurred to me that the note produced by the wing of an insect furnishes a simpler proof of the possibility of transmitting a rapid series of impulses along a nerve. The wing of the humble-bee produces the note F in the lowest space of the treble clef. It gives, therefore, 352 complete vibrations in a second. Every downward motion of the wing doubtless results from an impulse sent along the nerve to the muscles that lowers the wing. Therefore we may conclude that about 352 impulses per second traverse the motor nerves of the humble-bee's wing during flight. In the honey-bee the note of the wing is A in the treble clef—that is, two notes higher than in the humble-bee, so that 460 impulses appear to pass along its motor nerves in a second. In a human motor nerve the impulses transmitted by it during voluntary effort are not more than 10 or 12 per second (Schaefer). I have therefore some substantial evidence in support of my theory of sound-sensation. And I cannot but think that the evidence in favour of it will increase. I do not wish you to suppose that on my theory of hearing difficulties disappear; far from it. I merely assert that the difficulties which seem insurmountable on the theory of Helmholtz are diminished by the theory which I have submitted. Should my theory of the sense of hearing find acceptance, it will lead to a reconstitution of theories regarding the other sense organs.

Harveian Lectures

ON

CANCER OF THE UTERUS.

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LECTURE I.

GENTLEMEN,—No apology is needed for making cancer of the uterus the subject of the Harveian Lectures; the disease has been, and always will be, one of great interest to the practitioner and the pathologist. The frequency with which it is met, its irresistible progress, the horrible sufferings which it entails upon its victims, the utter helplessness of medicine in its presence, and its fatal character, all alike join in demanding a careful study of its insidious onset and destructive habits. I should have liked to have reviewed the history of cancer, to have summarised the views which have been held with regard to it, and the various methods of treatment which have been suggested and practised with a view to its cure and the relief of the symptoms and sufferings caused by it, and to have traced the progression and retrogression of knowledge with reference to it; but time will not permit me this indulgence. I must be satisfied with endeavouring to depict to you the present state of scientific knowledge with regard to the disease. To do this I must invite your attention more particularly to the early stages of cancer—the curable stages, if there be any such—before the diseased process has passed beyond the limits of the uterus itself.

Before beginning the consideration of the subject we must have a clear and exact knowledge of what we mean by cancer; and to avoid misunderstanding I will explain the meaning I shall attach to the word. I adopt that meaning which is given to it by one school of pathologists, and which appears to me to be the most reasonable, and the most likely to favour the growth of our knowledge of malignant diseases. Cancer, then, is a new growth possessing malignant properties—that is, it possesses the power of invading neighbouring tissues, and of reproducing itself in the form of secondary growths in other and distant parts. It is not so very long—not more than forty years—since the term was applied to growths which are now known to be devoid of any malignant properties. Fibroid tumours of the uterus were then regarded as cancer, but without good reason. They possess none of the peculiar properties, anatomical or clinical, which are possessed by the more serious affection. The distinction between growths which possess malignant properties and those not possessing them is to be made by two kinds of observations—those made at the bedside and those made at the laboratory. Clinical observation alone is sufficient to decide whether a growth be malignant or not, provided one condition is fulfilled—viz., that time is not stinted. Weeks or months of watching will solve the question; but examination of the growth by means of the microscope enables us to solve it at once. All malignant growths, however, are not cancer, and clinical observation, as a rule, is not equal to making the distinction between the different kinds of malignant disease. Here the work of the laboratory, and, above all, that done by the help of the microscope, comes to our aid. It is by the microscope alone that we are enabled to distinguish them. Progress in our knowledge of malignant disease in the future will depend in a great degree upon microscopic or laboratory work. Its revelations must form the basis of the classification of our clinical observations. During the early stages of cancer, or of other malignant growths, the microscope, I believe, will enable us to recognise and make sure of the disease long before clinical examination; and it is by no means improbable that in any given case, even in the most advanced stages of cancer, the structures revealed by the microscope will empower us to read back the whole of its past history, when clinical examination and observation of the living growth have failed to cast a ray of light upon the previous progress of the disease.

The varieties of malignant disease which affect the uterus are three—namely, sarcoma, carcinoma, and adenoma. Sarcoma and carcinoma are always malignant; adenoma often, but not always, but perhaps always in the uterus. Sarcoma is a growth of the connective tissue type. "It originates in a structure of the connective tissue group, and grows from its constituent cells. Carcinoma and adenoma, on the other hand, contain epithelial elements, and these elements are the structures which give its special characters to the class. All these tumours consist of epithelial cells on the one hand, and of vascular connective tissue on the other. The latter tissue goes to form the framework or stroma in which the epithelial elements are embedded. Some of these are built exactly on the plan of some particular gland; the new-formed tissue corresponds to a definite glandular type. These are called adenomata. Another group never reaches this perfection; they exhibit, as it were, only the first stage of the gland-making process. Epithelium and fibrous tissue interpenetrate each other in an inchoate way. The process is never carried higher. By the multiplication of epithelial cells we have produced nests and clusters and strings of cells, and these are embedded in connective tissue whose elements are likewise multiplying. The result is a neoplasm consisting of a fibrous network or framework, in the meshes of which are lodged a multitude of variously shaped epithelial cells. But there is no orderly arrangement of these epithelial cells. In the adenomata they tend to clothe the alveoli in

a regular way, leaving open a central lumen in the acinus of a gland." (Ziegler.) It might be thought that with anatomical characters apparently so distinctive there would be no difficulty in distinguishing between the different kinds of malignant growths. Such, however, is not always the case, because growths of the connective tissue type or sarcomata sometimes assume an alveolar form, and their alveoli contain groups of cells which are indistinguishable by the microscope from epithelial cells; so that, judging by anatomical evidence alone, a sarcoma may be mistaken for a carcinoma, and a carcinoma for a sarcoma. This fact has led to different views with regard to the origin of cancer. Some authorities maintain that it originates only in tissues in which epithelium is present, while others hold that it originates in connective tissue in the absence of epithelium. I will not enter upon a discussion of these views, for the definition of cancer which I adopt obviates the necessity for it. I define cancer not anatomically only, but anatomically and genetically—that is, cancer is an alveolar new growth containing epithelial structures which have originated from previously existing epithelium. In this sense only will the term be used in these lectures.

Before classifying and describing the various forms of cancer as they affect the uterus, we must enumerate the parts into which the organ is divided, and note their limits. The uterus is divided into three parts, according mainly to the character of the epithelium and of the glands met with in each part. The first is the vaginal portion. This is the part of the uterus exposed in the vagina. It is bounded below by the stratified epithelium covering the vaginal surface of the cervix, and above by a line drawn from the external orifice, or a little above that point, to the insertion of the vagina. The discovery of the position of the original external orifice is, however, in many cases difficult, and sometimes impossible. The position of it alters, and its characters are liable to be destroyed by tears and by "erosions." The position of the external orifice is that place where the squamous epithelium covering the cervix ends and the transitional begins. This transitional epithelium disappears in many cases, and is replaced by a glandular "erosion," which is covered by columnar epithelium, and the columnar epithelium meets the squamous of the portion without the interposition of the transitional, and may even extend over an area which in health was covered by squamous epithelium. Such surfaces contain glands, and present the characters of the mucous membrane of the canal of the cervix. They should, I think, be treated as parts of the mucous membrane of the cervical canal, and therefore I shall limit the term vaginal portion to that part of the cervix which is covered by epithelium of the squamous and transitional kinds. This will give the inner end of the line limiting the portio vaginalis above, a little within the cervical canal, in cases of small narrow os externum; and somewhere on the surface exposed to the vagina, in cases of "erosion" or of lacerations of the cervix with eversion. This portio vaginalis is really a cup of stratified epithelium resembling a tailor's thimble, which fits on the lower end of the cervix proper.

The next part is the cervix. It is limited below by the portio vaginalis, above by a plane drawn transversely through the inner orifice, or more accurately through that point where the follicles characteristic of the mucous membrane of the cervix end and the tubular glands characteristic of the decidua begin. The portion of the organ above this plane constitutes the body and fundus of the uterus. This division of the uterus with the boundaries mentioned is of importance because cancer may begin in any one of them, and it appears that the disease generally presents different characters, runs a different course, and is amenable to treatment in different degrees, according as it begins in one or other of these divisions. To trace the life history of cancer has always been found to be a difficult task, and the difficulty has arisen from two causes:—Firstly, because cases rarely come under our notice at a period sufficiently early for observations of the first beginnings of the disease to be made; they come at an advanced stage, when it has become impossible to guess even at their earlier course; from this time on to its certain and uniform termination we possess ample knowledge of the disease, of a kind. The second cause of difficulty is that when cases are examined early their true nature is overlooked. I believe this to occur much oftener than is generally supposed. The result is a very scanty knowledge of the natural history of cancer, with very imperfect descriptions of it.

Cancer is usually classified into scirrhus, encephaloid, medullary, and epithelioma. This classification has no value, and little meaning, as far as the uterus is concerned. Names have also been given to the disease descriptive of the morphology of the new growth—such as cauliflower excrescence, polypoid, diffuse cancer, &c.; but no classification of cancer of the uterus according to its structure has been made with the exception of that made by Ruge and Veit. I shall not refer again to the usual division into scirrhus, encephaloid, &c., but shall describe the structures met with in cancers of the several parts of the uterus, and then I shall arrange cancers according to the structures we shall have met with. The observation of structure alone is not sufficient. We want to trace the course of the disease, the lines along which it moves, discover the tissues which form its favourite pasture—in short, to read its history. When we shall have done this, we may hope to know something about it, and to be in a position to estimate, in some degree at least, the value of any proposed method of treatment. Cancer of any one part of the uterus is cancer which has originated in that part, and not cancer which has invaded it from some other source. Now cancer may begin in the vaginal portion, in the cervix, or in the body of the uterus, and these I shall describe by examples of each. Cancer of the vaginal portion and of the cervix have been described together until Ruge and Veit published their work on Cancer of the Uterus—a work which marks an epoch in the study of the disease.

CANCER OF THE PORTIO VAGINALIS.

Cancer of the vaginal portion begins in the stratified epithelium on the vaginal surface, or in the transitional epithelium at the os externum. Cancer involving this part is common enough; indeed, most of the cases of so-called cancer of the cervix are instances of cancer involving this part, but not originating in it; the instances, however, in which cancer had originated in the portio, and in which the disease was observed at an early period, are very few. Ruge and Veit, to whose work I have already referred, and to which I shall have to refer again, describe twenty-one cases of what they consider cancer of the portio. Among them are included glandular cancers, originating in erosions, as well as certain malignant growths, originating in the connective tissue—which they include among cancers. The glandular cancers I shall range among cancers of the cervix proper, and the connective tissue growths among sarcomata. If we exclude these from among Ruge and Veit's cases, we find they have seen no case of cancer of the portio, or only one surrounded by doubt. Of cancer of the vaginal portion I have observed eight cases only, and have seen specimens from several others; and it is upon these cases mainly will depend the account I have to offer of cancer of this part. I know of no better way of giving you an idea of the disease than by describing typical cases as fully as possible.

CASE 1.—This case presented perhaps the earliest instance of cancer which can be distinguished with certainty. It was a patient in whom the cervix had been divided into three lobes by laceration. She improved greatly under treatment; so much so, indeed, that she complained of no uterine symptoms at all. Two of the lobes into which the cervix had been lacerated assumed a healthy appearance, but the third remained in an unsatisfactory condition, and I cannot tell you what was unsatisfactory about it. It was not hard, it was not unduly red, it did not bleed on digital examination, it did not enlarge, and yet it looked vicious; and the vicious character seemed to be expressed by a slightly livid appearance of the part only, and scarcely that even. But I will read brief notes of the case to you.

The patient was thirty years of age, married, and had had two children and one miscarriage. She was admitted into University College Hospital on Jan. 12th, 1886. She knew of no cause for her illness; but she began to bleed in February, 1884, when she was two months pregnant: she had several irregular floodings until May, when she miscarried, and was laid up afterwards for six weeks with what she called "rheumatism" in her foot and elbow. She afterwards improved, but since the miscarriage menstruation has been irregular, returning at too short intervals, and lasting longer than usual. She did not feel any the worse for it until eight or nine months ago, when the flow began to be so excessive and prolonged as to give her only one week clear. Her strength and general health failing, she sought advice. She had lost flesh of late. She said she had sore-throat and loss of hair in 1884, but no rash. She began to menstruate at twelve years of age; was regular every four

weeks, the flow lasting a week in considerable quantity, but without pain. She was married at twenty-two. Her second labour was accompanied by a flooding, but she made a good recovery. No family history of cancer was obtained. Her mother died of consumption.

The cervix was low in the pelvis; it was torn on the right side and on the left, and deeply through the anterior lip; there was considerable eversion; there were granules on the everted surface like enlarged and closed follicles. The body of the uterus was anteverted and normal. Through the speculum the vaginal portion appeared pale and covered by squamous epithelium; the left three-quarters of the anterior lip was everted, and bled when touched. The right quarter formed a projection like a nipple; the posterior lip was everted and paler than the everted portion of the anterior. It did not bleed on examination. There was a considerable quantity of muco-purulent discharge on the surface. Temperature 98·4° to 100° F.

By the application of a solution of sulphate of copper to the cervix and canal of the body, menstruation became normal, the discharge ceased, and the lips of the cervix assumed a healthy appearance, with the exception of the left portion of the anterior lip. In July this portion of the anterior lip was removed for reasons already given. This was examined under the microscope, and a very interesting state of things was found. Beginning our examination on the vaginal surface, we found the stratified epithelium intact and somewhat thickened. At the reflexion of the vagina, however, the deeper layers of the epithelium sent processes into the subjacent tissue, and beyond this, on the surface of the portio, several such processes were met with; these processes branched, and some entered glands, which were evidently the glands of an erosion; further on were found swellings of the deeper epithelial layers and glands lying in them; glands again running more or less parallel to the surface, branched or simple; then a gland, one side of which was invaded by squamous epithelium, the rest being lined by epithelium of the columnar form; then irregular thickenings of the deeper strata of the epithelium of the surface, running into and between the glands; the cells of such glands were partially replaced by the squamous variety and were rapidly proliferating; then we came upon a part of the cervix in which the papillæ were everywhere enlarged, and beneath which were found numerous glands. The cervical tissue near the whole of the surface I have described was everywhere infiltrated with small cells, but this was not seen under those portions over which the superficial epithelium was healthy. In some places the glands were filled with secretion, and some were changed into closed follicles. This is the earliest condition of undoubted cancer of the portio which I have met with, and it is the earliest condition which is recognisable as cancer. It presented no symptom, and was discovered accidentally. Its nature was not recognised with certainty, but was held in suspicion.

CASE 2.—In this case there was no difficulty in coming to the conclusion that the disease was cancer, for there was a new growth which progressed so rapidly as to leave no doubt as to its nature. It was in an early stage, but it differed in several respects from the one I have just related. In the first case cancerous processes appeared to enter the cervix from several points on the portio. In the case we deal with now there was a distinct papillary growth situated at the external orifice on the posterior lip.

The patient, aged thirty-nine, married, was admitted into University College Hospital on Dec. 10th, 1883; and she gave the following account of her illness. About Sept. 1882, she noticed a yellow discharge from the vagina, and since that time she had been getting thinner. She attended as an out-patient in June, 1883, and was prescribed a vaginal injection containing Condy's fluid. About a fortnight later, when administering to herself an injection, she noticed blood in the discharge. The blood appeared again when an injection was administered, and varied in quantity from time to time, and afterwards appeared independently of the injections. For nine months there had been pain during, and hæmorrhage after, sexual congress. For five weeks before admission the blood had increased in quantity and the discharge had been offensive. The patient began to menstruate at eleven years of age, and had always been regular until nine months before admission, the quantity lost being moderate. She had been married eighteen years, had had one child seventeen years ago, and one miscarriage a year later. She said that she had had inflammation of the womb three times, and had suffered slight scalding with micturition since she had rheumatic fever nine years before.

On admission she was thin, but looked fairly healthy, and weighed 6 st. 1 lb. External examination of the abdomen revealed nothing abnormal. On vaginal examination there was found what was taken for a red ulcerated surface, raised about one line above the level of the surrounding parts, and situated on the posterior lip and part of the anterior. There was a narrow strip of healthy mucous membrane on the posterior lip, between the growth and the insertion of the vagina, and another about three-quarters of an inch in width on the anterior lip. The red surface had the diameter of a florin. Four days before it was not bigger than a shilling, and affected chiefly the posterior lip. On the left side there was a fissure in the cervix, and the lips were everted.

The cervix was amputated above the internal orifice. The part removed was an inch and a half in length. On the posterior lip was no ulcer, but a raised papillary growth, about three-quarters of an inch in diameter, and on section its thickness was seen to vary from one-third to one-sixth of an inch. It was rough on its surface; and on its sides towards the commissure, and on the anterior lip, was a shallow, narrow, depression. At the border of this depression the stratified epithelium terminated abruptly; the border of the epithelium was sinuous and somewhat swollen, as if thickened. Posteriorly the stratified epithelium was retained up to the growth. The lips were everted, so that the disease appeared to affect the lowest parts of the lip; this was, however, not really the case, for it originated at the os externum, and was advancing along the posterior lip. On examining this specimen with the microscope, and beginning on the healthy surface of the portio, this was found covered by stratified epithelium; beneath the epithelium were the papillæ, somewhat enlarged: beneath these, again, was what appeared to be the healthy tissue of the cervix. As we approached the diseased part, the deeper layer of the stratified epithelium was found increased in thickness; small cells and nuclei appeared in great numbers in the tissue immediately beneath the thickened epithelium. Close to the new growth the stratified epithelium became greatly increased in thickness; here the papillæ became longer, and strings of epithelial cells ran into the tissues beneath, and papillæ grew upwards from the tissue beneath towards the surface, and penetrated the superficial thickened layer of squamous epithelium, as the processes from that epithelium penetrated the tissue of the cervix. These papillæ grew very rapidly, and over their points the horny layer of the squamous epithelium was, in the main, lost. It should be borne in mind that the deepest layer of the stratified epithelium of the cervix is formed of columnar cells, the cells of the middle layers are variously shaped, and the superficial cells only are flat. At the point where the deeper layers began to proliferate the superficial layer of flat horny scales was lost. As the growth proceeded the columnar cells forming the deepest layer lost their character, and abutting against the proliferating stratified epithelium was a thickness of what appeared to be indifferent tissue; beyond this was a string of cancerous cells, then again what appeared to be indifferent tissue. This might lead us to the conclusion that the cancer was really developed from connective tissue, both the connective tissue and the epithelial having been first transformed into indifferent tissue. The loss of the flat horny layer of the epithelium, and the apparent termination of the proliferating epithelium in indifferent tissue, appears to favour this view—a view which has been adopted by Ruge and Veit. A little closer examination, however, will, I think, show that the layer of indifferent tissue in which the proliferating epithelium seemed to end was a rapidly growing papilla—that this was making its way through the thickened epithelium to the surface, and that in the course of this process the horny epithelium fell off. The surface epithelium falls off as the result of the growth of tissues from beneath towards the surface, as I shall have occasion again to point out. The cords and strings of cancerous tissue which appeared in the growth, and which anastomosed freely, were not cancerous tissue developed from connective or indifferent tissue, but the thickened cancerous epithelium of the part penetrated through and through and in all directions by papillæ growing towards the surface, and the loss of the epithelium in places on the surface was the direct effect of the growth of the papillæ. The accuracy of this view of what occurs is shown by the fact that in other places the epithelium was continuous from the healthy

surface to the diseased, and that in many places in the diseased surface points were found denuded of epithelium. It is a curious fact that when papillæ grow on a uterine surface covered by columnar epithelium they are always covered by columnar epithelium; whereas when they grow on a surface covered with stratified epithelium the surface epithelium is lost—the horny layers are not compatible with growth.

CASE 3.—The third patient, a widow, aged forty-two, was admitted into University College Hospital on Nov. 26th, 1883. She had been treated on and off for perimetritis for several years. She said that twelve months ago the pain in the side for which she had been treated returned with great severity; it radiated from the left side of the lower abdomen. At the same time she had a dragging pain in the left axilla. Four months ago she noticed a greenish discharge from the vagina, which became offensive two months ago. The discharge was in considerable quantity during the day, and contained blood. During the last week the blood had diminished, while the discharge had increased, but the latter had to a great extent lost its fetor. The catamenia appeared first at eighteen; they had returned regularly since, in moderate quantity and without pain. The patient was married at twenty-two years, and had had seven children. The third labour was hard, but delivery was accomplished without the use of instruments. It was followed by a flooding. After this she said that she had inflammation of the womb and bowels. In her fourth confinement she was delivered of twins. She had had no miscarriages. The father died of asthma; the mother of a cause unknown to the patient; one sister died of cancer of the womb. The patient was fairly nourished; the heart and lungs were healthy. The cervix of the uterus was flattened and circular, almost like the head of a mushroom. There was a deep laceration in the left commissure, but the anterior and posterior lips and the right commissure were not torn. The cervix was amputated just above the internal orifice. The portion removed was an inch and a half in length. The posterior lip was the seat of a papillary growth one inch in diameter. There was a narrow strip of healthy mucous membrane between the disease and vaginal vault posteriorly. The vaginal canal appeared healthy. On microscopic examination, it was found that in places the superficial layers of the stratified epithelium were lost, and the deeper layers were exposed; in other places the superficial layers were retained, and the deeper layers were thickened and presented a wavy border. The disease was quite superficial, its thickness being not more than one-sixth to one-third of an inch.

(To be concluded.)

THE TREATMENT OF TYPHOID FEVER BY THE COLD WET PACK AND ALCOHOL.

BY JOHN CURNOW, M.D. LOND., F.R.C.P.,

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DURING the past few years I have had under my charge at the two hospitals with which I am connected more than three hundred cases of typhoid fever, and my experience has led me to a line of treatment in severe cases which has been very successful, but which is not quite in accord with the statements laid down by some of our most recent authorities on this disease. In "Quain's Dictionary of Medicine" Dr. Broadbent urges most forcibly the advantages of the cold-bath treatment, and states that "the cold wet pack has been tried as an alternative to the bath, but without effects adequate to the requirements of the case." I shall show that, when the cold wet pack has been carefully and systematically applied, it is not only more easily made use of, and is less distressing to the patient than the cold bath, but that it is an adequate and effectual alternative. I have used it not only in cases with high temperature, but even in cases complicated with hæmorrhage, and in the latter any movement of the patient, so as to place him in a bath, would have been attended with grave risk. My first experience of the cold wet pack as a remedy was in 1876. I was called in consultation with Dr. Massey, of Camberwell, to a case of acute rheumatism and hyperpyrexia. At 2.45 P.M. the temperature was 106·8° F., and was rising so rapidly that at 3.5 P.M. it was 107·2°. The patient, a young man about twenty-five years of age, was quite unconscious, and his pulse was so rapid that it could not be counted. It was impossible, for want of the necessary assistance in an emergency in a private house, to put him into a cold bath, so he was stripped naked, a mackintosh sheet placed under him, and he was wrapped in a linen sheet wrung out of cold water, kept at 32° by the addition of lumps of ice. The first application stopped the rapid rise in temperature, but the sheet began to get warm in two or three minutes, when another was substituted for it. On this being replaced by a third the temperature began to fall, and on further reapplications this fall became very decided and the patient's condition rapidly improved; his pulse fell, and he was soon quite conscious. After a continuous packing in this manner for four hours, and intermittent reapplications during the night, the tendency to an excessive rise in temperature gave way, and the patient recovered without any further complication or relapse. He had no cardiac mischief, and I saw him in perfect health only two weeks ago.

In typhoid fever the rise in temperature is more gradual, and the risk of a rapid death from hyperpyrexia is not nearly so imminent as in rheumatic fever. I therefore pack only the chest and abdomen, leaving the head and the extremities free, and a thin linen sheet is wrung out of ice-cold water and folded double, and used as in the case just recorded. This method of treatment is adopted whenever the temperature remains above 103·5° for any time (say twelve hours), and is continued until it falls to 102° or less. The pack is changed before it gets in the least dry, and another, wrung out as before, replaces it. When the temperature falls to 102° or less the patient is wiped dry, and the packing is stopped until the temperature again rises to 103·5°. In very severe cases the temperature is taken every half-hour or every hour. In a very protracted and severe case (J. A——), to which I shall presently refer, the patient was in the pack continuously for eight days and at intervals for five days longer, so that this treatment can evidently be carried out with benefit for a much longer time than is usually supposed.

In many cases, when the cold wet pack has been used to diminish the temperature, and to prevent it from rising above 104°, I have given no stimulants or drugs, excepting two or three grains of quinine two or three times daily. The patient is kept in bed, on a milk and beef-tea diet, and in an uncomplicated and ordinary case nothing else is required. I mention this particularly, because I do not prescribe alcohol in every case of typhoid. I have treated nearly 100 cases without any alcohol, and considerably more than this number with less than twenty ounces of brandy throughout the whole course of the illness and convalescence. I am quite convinced, however, that in exceptionally severe cases a much larger quantity of alcohol may be administered than is usually the practice, and in some desperate and apparently hopeless cases it is the only remedy that will save the life of the patient. It must be given with discrimination, and if its administration be carefully watched, and if the patient is improving or not becoming worse, there can be no valid reason why we should not push brandy as we do quinine, iodide of potassium, or opium in suitable cases. I quite agree with the late Dr. Murchison, that "fever may be treated successfully with little or no alcohol," and that it is "very rarely necessary to give more than eight ounces of brandy at any period of the fever"; but I must take exception to another of his statements, that "if, notwithstanding this amount (12 oz.), the patient die, it is doubtful if any amount of brandy would have saved him, and a larger amount would probably only have contributed to the fatal event." The cases which I record will prove that much larger amounts have not contributed to a fatal result, and I further believe that in these exceptionally severe cases the patients owe their lives to the large quantities of alcohol which were administered to them, and that they would not have recovered if any limit such as 12 oz. had been enforced, and I know that this opinion is shared by those who watched and nursed them.

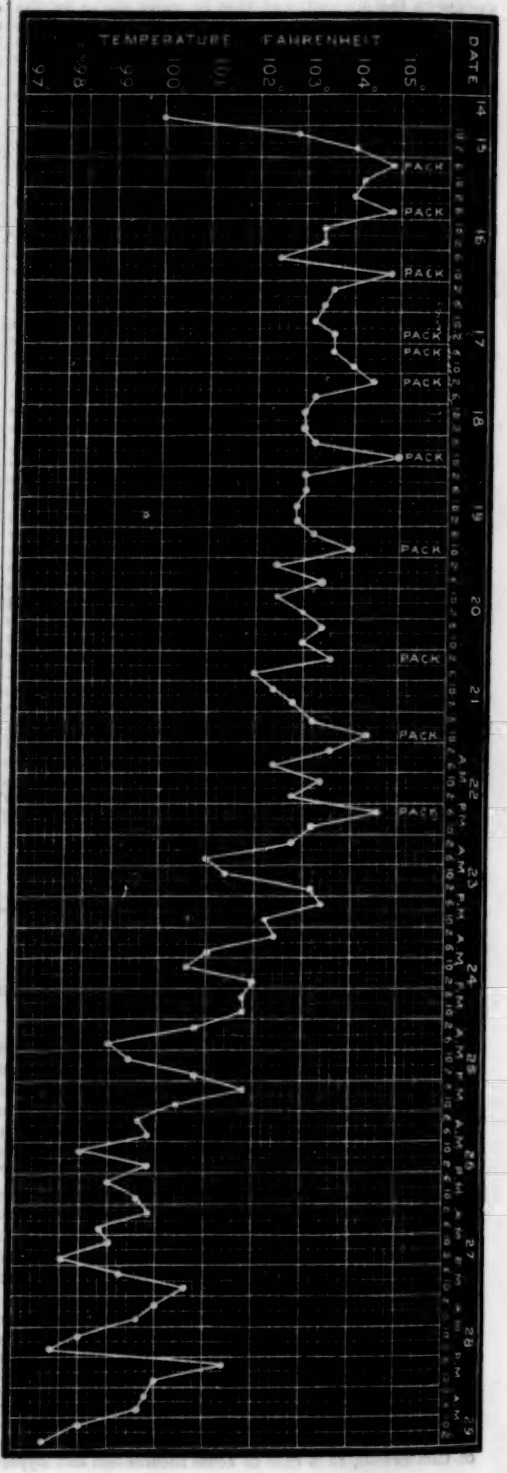
The first case of typhoid fever in which I saw very large quantities of stimulants administered was during my house-physiciancy at King's College Hospital, when a domestic servant about twenty-two years of age was given one pint of brandy and some champagne daily for three or four

successive days. She recovered from one of the most severe attacks which I have ever witnessed. I saw her some years after, and she told me, in reply to my inquiry, that she had never tasted spirits after leaving the hospital, and that even taking them up to her master's study at night nearly made her sick, so much did she dislike their sight and smell. In another case, in which a nurse at the Seamen's Hospital in somewhat delicate health fell ill with typhoid fever, I was summoned by an urgent message and found her almost moribund, with a double hypostatic pneumonia, reaching on both sides as high as the spine of the scapula. Brandy in milk or beef-tea was given to her every twenty minutes for two days, and at gradually increasing intervals for some days after, with occasionally some champagne, and she made a good recovery. She is now the sister matron of a large provincial hospital, and has been actively and constantly engaged in nursing since her illness some eight or nine years ago. With the exception of taking a glass of beer with her luncheon, she has taken no stimulants since then. These cases show that brandy given in such large doses, instead of inducing people, especially women, to become drunkards, really have an opposite effect.

The method of administration which I follow in my worst cases is this: About three or four tablespoonfuls of milk or strong beef-tea are given regularly every twenty minutes or half-hour, and to these brandy is always added, the quantity being calculated so that the full amount of twelve, sixteen, twenty ounces, or even more, in the twenty-four hours, is equally distributed. If the patient refuses milk and beef-tea, as is occasionally the case, or the pulse becomes smaller and intermittent, a tablespoonful or a little more of champagne is used in their stead, and the brandy added to it, or if sickness be an urgent symptom the champagne is given freely for a few hours without brandy. In no instance has the brandy been given alone. The following cases are appended as typical of the advantages that have been derived from this plan of treatment.

CASE 1.—J. R—— was admitted on October 14th, 1884, having been ill with diarrhœa, occasional epistaxis and headache for nearly a fortnight. He had taken several doses of castor oil. On admission, there were tenderness and gurgling over the right iliac fossa, a few typical spots, and diarrhœa. His pulse was 96°, regular, and the temperature 102·4°. The diarrhœa continued. Next morning a smart attack of epistaxis occurred, and in the evening his temperature rose to 104·8°. He was constantly packed for twenty-four hours until the temperature was reduced to 102·4°, and, on its rising to or above 103·8°, this was repeated for the next seven days, after which he gradually improved. He had several attacks of epistaxis during this period, and his condition can be best appreciated from the notes for Oct. 23rd and 24th:— Oct. 23rd: The patient is very restless; tongue dark brown, covered with sordes; skin dry; bowels open three times; respiration 36; pulse 120, very small. 24th: Tongue black; muttering delirium throughout the night; quite unconscious; passes everything involuntarily; bowels open three times; he still takes milk well, although swallowing seems laboured. Respiration 40; pulse 128, so small as to be hardly counted. On the 27th his pulse was slower, temperature lower, and his tongue began to clean, and from this date his recovery was uninterrupted. The amount of stimulants which was given to him was as follows:—18th, brandy, 4 oz.; 19th, 4 oz.; 20th, 6 oz.; 21st, 10 oz.; 22nd, 12 oz.; 23rd, 14 oz.; 24th, 14 oz., and a pint bottle of champagne; 25th, 14 oz., and 2 pints of champagne; 26th, 14 oz., and 2 pints of champagne; 27th, 10 oz.; 28th, 6 oz.; 29th, 6 oz.; 30th, 4 oz.; 31st, 4 oz.; Nov. 1st, 2 oz.; making a total of 5 pint bottles of champagne, and 124 oz. of brandy. The temperature chart will show the severity of the case (by no means one of the worst), and the advantages of the cold wet pack and alcohol, which were freely used in the earlier stages of his illness.

CASE 2.—T. H—— was admitted on Oct. 3rd, 1884, after an illness of about fourteen days, but the patient was so prostrate that no reliable history could be obtained. He had some abdominal tenderness; his face was cyanosed; there was marked subsultus, a dry brown tongue, and a weak fluttering pulse of about 120. The temperature, which was 101·4° on admission, quickly rose to 104·2°. The area of splenic dulness was increased, and there were a few rose-spots. His condition from Oct. 9th to 15th is thus described in the case-book: "Patient lies quite unconscious; face blue; subsultus very marked; diarrhœa continues, and



occasionally a little blood in the motions, which, as well as the urine, are passed involuntarily; tongue black and dry; pulse 144, almost imperceptible." On the 15th he began to show some signs of improvement, and from this date he slowly progressed towards recovery, although there was a relapse lasting eighteen days. He was packed whenever the temperature rose above 103·5°; and the daily quantity of stimulants given to him was: on Oct. 3rd, 4th, and 5th, 10 oz.; 6th and 7th, 15 oz.; 8th, 15 oz. and 2 pints of champagne; 9th to 14th, 20 oz. and 2 pints of champagne; 15th, 15 oz.; 16th, 10 oz.; 17th to 22nd, 6 oz.; 23rd to Nov. 5th, 4 oz.; and Nov. 6th to 8th, inclusive, 2 oz.: making a total of 310 oz. of brandy and 14 pints of champagne.

CASE 3.—J. S——, aged nineteen, was admitted on Sept. 15th, 1884, after a week's illness. On admission his temperature was 103·6°; his pulse 120; tongue brown and dry; abdomen tumid; pain and tenderness on pressure over right iliac fossa; bowels loose; and there were a few rose spots scattered over his chest and abdomen. He became rapidly worse, with low muttering delirium; and on the 19th, at 9 A.M., his temperature having risen to 104·4°, he was packed, and this was renewed again and again, when his temperature rose above 103·6°. From Sept. 17th until the 27th inclusive he was quite unconscious: his pulse was 140 on the average, fluttering and irregular; he had some diarrhœa; and on the night of the 22nd his temperature fell 8° (from 105° to 97°), without any hæmorrhage, and everyone expected his immediate death. By the persistent application of warmth and the use of stimulants he rallied, and his temperature at 9 P.M. on the 23rd had risen to 103·8°. On the 27th he began to improve, and progressed favourably until Oct. 12th, having been allowed some custard on the preceding day. A relapse took place and continued until the 26th, and he then again went on satisfactorily until Nov. 12th, a slice of mutton having been given to him for dinner on the 9th, 10th, and 11th. A second relapse now occurred, but it lasted only three days. From this date he slowly convalesced, and was sent home to Norway on Dec. 12th. He was put on 4 oz. of brandy on Sept. 15th, 16th, and 17th; on the 18th, 6 oz; on the 19th, 6 oz. and 2 pints of champagne; on the 20th and 21st, 10 oz. and the same quantity of champagne; on the 22nd and 23rd, 12 oz.; from the 24th to the 30th inclusive, 16 oz. daily; from Oct. 1st to the 4th, 12 oz.; from 5th to 8th, 8 oz. and 2 pints of champagne; from 9th to 17th, 4 oz. and 1 pint of champagne; on the 18th the brandy was raised to 6 oz, and again reduced to 4 oz. on the 25th, when the champagne was stopped; on Nov. 6th, 2 oz. only of brandy were given daily, and on the 9th its use was discontinued. The total quantity consumed by this patient was 388 oz. of brandy—2 gallons, 3 pints, 8 oz.—and 21 pint bottles of champagne.

CASE 4.—In the case of J. A——, who was admitted on Feb. 16th, 1884, we had to deal with the most protracted case which has come under my notice. He had been ill some nine or ten days previous to his admission, and the case ran a severe course for five weeks, after which he had a very severe relapse for about twenty days. During the first stage of the illness he was occasionally packed, and from 4 oz. to 8 oz. of brandy were administered daily. In the relapse he was packed almost constantly for eight days, and intermittingly for five days following, as his temperature when not in the pack was almost always 104°, and on two occasions reached 105°. Ten ounces of brandy and two pints of champagne were given daily throughout this relapse. His temperature for a fortnight was almost steadily above normal at some time of the day, and again rose after this, so that it was only on the 130th day, or after eighteen weeks of illness, that it became normal and steady. An exacerbation on the 128th day was probably malarial, as it gave way to 20 grs. of quinine administered in a single dose. He took brandy daily from his admission to April 14th, and 6 oz. of Tarragona port from that date until June 21st, when he was able for the first time to sit up in bed. His temperature fell suddenly on one night during the first relapse from 105° to 96·2°, and the fall coincided with severe vomiting, but there was no hæmorrhage, sweating, or profuse diarrhœa. For the last nine weeks of his illness, during his third pyrexial rise, he took 5 grs. of quinine every four hours. Fresh spots came out during both his relapses. He was kept on milk, with occasionally beef-tea, from Feb. 15th to April 19th, when some custard was allowed. On the 24th a little bread was given, but this and the custard were stopped on the 26th; they were resumed on May 10th. Fish was added on the 21st. A mutton chop replaced the fish on June 2nd, and on the 26th he was put on the ordinary hospital regimen.

I have selected these cases as typical examples of the advantages derived from wet-packing and free stimulation, as they were for longer or shorter periods in the most imminent peril, and in all of them complete recovery took place, notwithstanding, as some would say—or in consequence of, as I should say,—the amount of alcohol which was administered. All credit must be given to my house-physicians—Dr. E. Penny and Dr. E. H. Booth—for their assiduous attention, and to the excellent nurses who watched over these sailors. It must be remembered that the cases of fever admitted into the Seamen's Hospital are on an average more severe than those seen in general hospitals, for the patients have usually been kept at work as long as they could move about the vessel; that they have had no rest, medical attendance, or proper dieting previous to their admission; and that they are all adults, in whom a high rate of mortality is to be expected. In the past seven years I find that only eight deaths have occurred in the cases under my care, of which four were due to hæmorrhage, two to perforation of the bowel and peritonitis, one to exhaustion and thrombosis of the veins during a relapse and one to pneumonia.

SURGICAL MISHAPS.

By T. PRIDGIN TEALE, M.A., F.R.C.S.

SURGICAL mishaps are happily not always identical with surgical calamities, as the following three cases, slightly sketched without much detail, will show. The narration may be useful, and may bring comfort to others who meet with similar occurrences.

CASE 1. *Disappearance of Tumour after ineffectual attempts at Removal.*—I cannot do better than describe this case in the words of a letter which I wrote to Sir James Paget on Jan. 11th, 1878: "Mr. H——, of H——, consulted me three weeks ago about a tumour behind the angle of the left lower jaw. After existing for several years as a small movable lump, the tumour had within a few weeks begun to grow with an increasing rapidity. It was fairly movable in all directions, and I advised its removal. A fortnight later I went over to H—— to remove it, and then found that the tumour had become at least double in size, was very elastic, and more fixed. I cut down upon the tumour, and found that it involved, and seemed to be growing in, the anterior portion of the sterno-mastoid, and that it had no limiting capsule, as I hoped. Having stripped the outer side of the tumour with the finger, separating it from contiguous fibres of the muscle, I followed it deeply until I could almost touch the transverse processes, where it was firmly attached to deep structures in the neighbourhood of the large vessels. I therefore thought it more prudent to abandon any further attempts at removal. Having inserted a drainage-tube, I closed the wound, and all healed satisfactorily. Curiously, the rapid growth seems to have been checked, and this makes me regret that I did not strip the opposite side also, with a view to cutting off supplies." Sir James Paget and Mr. John Wood, who saw the patient, after hearing my description of the operation, agreed that no further surgical interference was advisable, and the former suggested a course of small doses of iodide of potassium, with large doses of liq. potassæ. On April 24th Mr. H—— wrote that, apparently under the influence of the medicine, the tumour had decreased so rapidly that ten days previously he had omitted the medicine, and that "it is now scarcely feelable and not perceptible." In December, 1878, he again wrote, "The tumour, or whatever it was, has departed in peace, seemingly never to return." I have heard of him from time to time, but never of any relapse.

Dec. 25th, 1886.—Mr. H——writes: "The tumour had existed two years before the operation. There is not a trace at present. I took about six bottles of the medicine, and the tumour disappeared in six months."

CASE 2. *Chronic Inversion of the Uterus; Attempted Reduction by Taxis; Laceration of Vagina into Douglas's Pouch; Recovery.*—Mrs. J——, aged twenty, was sent to me in November, 1884, by Dr. Blair, of Goole, suffering from inversion of the uterus resulting from her second confinement four months before. The labour was prolonged and difficult. She remained in bed for a week after delivery,

and on getting up for the first time the womb came down and protruded nearly two inches. The womb was returned, and never prolapsed again, but it was afterwards discovered that she was suffering from inversion of the uterus. The patient was anæmic and frail-looking. In consultation with my colleagues, it was considered that the os and cervix were so much relaxed that I might attempt to reduce the inversion by taxis whilst the patient was under ether. I therefore at once made the attempt, using, as I believed, no immoderate force, and fully realising the need of caution so as to avoid the danger of laceration. After careful pressure with the fingers upon the fundus, which in about a quarter of an hour had been reduced to within the level of the os, and just as it seemed that complete reduction was being effected, the whole receded within the peritoneal cavity through a rent in the roof of the vagina, posterior to the cervix. I was then face to face with a most difficult problem, and called to my aid Mr. Robson, who was in the Infirmary at the time. After some deliberation, we came to the conclusion that the safest course would be to transfix, tie, and cut off the inverted womb. This having been done, one stitch was inserted into the rent in the vaginal wall as a safeguard against prolapse of the bowels, and a large drainage-tube was inserted within the lips of the wound so as to project for about an inch into the peritoneal cavity, and was fixed by catgut sutures to each side of the ostium vaginæ. The vagina was carefully syringed with weak carbolic acid lotion, and well charged with iodoform. Her further progress was satisfactory. There were never any symptoms of peritonitis. In a few days her temperature rose to about 103°, and then slowly fell, and she returned home within three weeks of the operation. I have since heard that she is in good health, and menstruates regularly.

Dec. 25th, 1886.—Dr. Blair writes me: "Mrs. G—— is quite well; menstruates regularly, and suffers neither pain nor inconvenience."

CASE 3. *Wound of Popliteal Artery and Vein during an Operation for Necrosis of Femur; Recovery without Gangrene.* A young man, aged about twenty-one, came under my care at the Leeds Infirmary about six years ago, on account of necrosis of the femur. The sinuses led to the back part of the femur, about the bifurcation of the linea aspera. Having enlarged the sinuses, I had considerable difficulty in reaching the denuded bone. In trying to release what seemed to be an indurated edge of fascia or a ridge of new bone, I passed the knife along this edge, loosening it, as I thought, from its apparent attachment to the bone, when a gush of hæmorrhage startled me. To my dismay, the cord proved to be the popliteal vessels coated with a tough hard case of cicatricial lymph, and both artery and vein were wounded. Having commanded the breach in the vessels by the finger, I sent for my colleague Mr. Wheelhouse, who fortunately was paying his visit to the wards, and most kindly came to my assistance and gave me timely aid and counsel. Finding it impossible to deal effectively with the wounded vessels through the lateral wounds, I made a vertical incision about four inches long in the middle of the popliteal space, and so exposed the wounded vessels. Having severed the vessels at the seat of injury, I tied both ends of the artery and vein. The whole proceeding was both difficult and tedious. For some days I watched the case with grave anxiety, fearing gangrene and the need of amputation. Fortunately my fears were disappointed. The foot soon became warm, was never blue, and gave me no cause for anxiety. The wound healed favourably, and the patient recovered the use of the limb. Knowing the frequency with which gangrene results from arrest of circulation through both the main artery and vein of a limb, the impunity which resulted in this case was unexpected, and gave great relief to my mind.

Leeds.

PRESENTATIONS.—On the 21st ult., at Camberwell, Mr. Oldfield was presented with a marble timepiece and a purse containing £150, as a token of the esteem in which he is held, and as a mark of sympathy with him in the trouble entailed by an action which was brought against him, and summarily disposed of by the Grand Jury at the Central Criminal Court.—Mr. H. E. Richardson, who has recently resigned the post of senior house-surgeon to the Birkenhead Borough Hospital, has been presented by the nurses and others connected with that institution with a surgical case and other gifts, as a token of the high esteem felt for him.

CLINICAL AND PATHOLOGICAL ILLUSTRATIONS OF CEREBRAL LESIONS.

By DAVID DRUMMOND, M.D.,

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CASE 1. *Double Cerebral Lesion simulating an Apoplectic Bulbar Lesion.*—A boiler-smith, aged sixty-five, complained of nothing of importance until he reached the age of sixty, when he experienced "a very slight stroke," which affected his left side somewhat. Eighteen months later another somewhat similar seizure overtook him, also affecting the left side. His articulation now became difficult, and it was observed by his friends that his face was smooth and expressionless. Soon after this attack he came for the first time under observation, when the following points were noticed. The patient could walk, but he dragged the left leg slightly, whilst his grasping power was decidedly weaker on the left side. The face presented a stupid, stolid expression, the result of incomplete double facial paralysis. The tongue was protruded straight, but with undoubted difficulty, for the tip scarcely reached beyond the lips. The saliva constantly dribbled from his mouth. The speech was exceedingly indistinct, but there was an absence of true aphasia. One could imitate his attempts at articulation very readily by speaking with the mouth open and the tongue still. Both vocal cords were seen with the laryngoscope to be considerably relaxed. His attempts at swallowing were attended with great difficulty, and fluids frequently regurgitated through the nasal passages. I observed this patient for a considerable time before more alarming symptoms set in, and by degrees the signs suggestive of a bulbar lesion became intensified. The double facial and hypoglossal paralysis, the imperfect articulation, the difficulty in swallowing, all advanced together, whilst as time went on there was comparatively little alteration in his locomotion and grasping power. At length one day he was brought into the infirmary, having just had, it was stated, another seizure. It was then observed that, although conscious, he was almost speechless; the tongue could not be protruded; the lower facial muscles were completely paralysed; swallowing was almost impossible; both legs and the left arm were markedly paralysed, and the right arm enfeebled. After lingering in this condition for about three weeks, he sank and died comatose.

It was obvious that we had in this case to do with many of the features of an acute labio-glosso-laryngeal paralysis, such as Leyden and others have described as resulting from hæmorrhage or softening in the medulla. At the necropsy, however, the medulla and pons were found to be normal. The dura mater was thickened and firmly adherent along the edges of the longitudinal fissure; the pia mater and arachnoid were also thickened and presented the sodden wash-leather appearance so suggestive of general paralysis of the insane. The brain substance was of soft consistency. The vessels at the base were atheromatous, and in places markedly thickened, especially the termination of the internal carotid, the middle cerebral, and the posterior communicating on the left side. On cutting the cerebral hemispheres in the usual way, two patches of degenerated brain tissue were observed as the lower levels of the centrum ovale majus were reached, one in each hemisphere; these resembled cicatricial tissue. That on the left side appeared to be placed just above the posterior and middle portion of the optic thalamus, and that on the right was situated a little in front and to the outside of this point. The next section brought into view two cicatricial and cyst-like areas of degeneration. In the left hemisphere the disease occupied the anterior and inferior portion of the optic thalamus and the adjacent centre of the internal capsule, almost at its lower part; whilst in the right hemisphere it was found to implicate the lenticular nucleus of the corpus striatum (especially its middle and posterior portions), the middle of the internal capsule with the posterior part of its anterior division, and the external capsule. Thus it will be seen that the symptoms were due to two lesions which were almost symmetrically situated in each hemisphere. The diagnosis from bulbar disease was by no means easy, and practically rested alone upon the history of distinct hemiplegic seizures; but it must be borne in mind that there was no account obtained of a right-sided

hemiplegia, and I am inclined to think that the lesion in the left hemisphere was not followed by hemiplegia proper, but simply by paralysis of facial and hypoglossal nerves, the arm and leg paralysis developing later. This opinion is justified by the fact that the lesion was an old-standing hæmorrhage, whilst the paralysis of the right arm and leg only took place a few weeks before the case terminated, being due, in all probability, to an extension of the softening in the neighbourhood of the primary lesion.

CASE 2. *Disseminated Cerebro-spinal Sclerosis; Glycosuria.* Ed. H——, a boy, aged eight years, first came under observation in July, 1885, for headache and a staggering gait. It was stated that he had been ill for three months. There was neither vomiting nor optic neuritis. The speech was slow and hesitating. There was very slight tremor of the arms, but no pronounced paralysis of either upper or lower extremities, and the legs were free from rigidity. There was no nystagmus. The urine was normal; in some weeks, however, it increased in quantity, and sugar appeared. About this time he became gradually blind, and the discs grew white. The auditory nerves also became affected, causing deafness. The legs grew very feeble, but always remained flaccid, though the knee-jerk was increased. Three weeks before his death, which occurred thirteen months after the onset of the cerebral symptoms, the patient was confined to bed with paralysis of both arms and legs, though the former were affected to a slighter degree. His mental state towards the end grew very feeble, but diabetic coma never made its appearance. At the post-mortem which was incomplete, as it had to be made in the patient's home under rather trying circumstances, the body was seen to be markedly emaciated. The brain weighed 46 oz. The basal arteries were normal, but the small vessels of the pia were deeply congested. The convolutions were flattened, and to the touch the posterior parts of the hemispheres were harder than the anterior. Sections exposing the upper part of the basal ganglia revealed in the white matter symmetrically arranged patches of sclerosis, which passed backwards from opposite the middle of the optic thalami on each side. These sclerosed areas were very extensive, and were found to invade the occipital lobes to a marked degree. The grey matter was normal. Nodules were found in the upper part of the spinal cord, and one was observed in the white matter of the left hemisphere of the cerebellum, whilst another occupied the medulla, appearing on the surface of the floor of the fourth ventricle about its centre. The spinal canal was not opened.

CASE 3. *Injury to the Head; Chronic Meningitis; Ventricular Effusion; Minute Hæmorrhage in the Upper Part of Floor of Fourth Ventricle; Diabetes.*—A boy aged seven was admitted into the infirmary in a very emaciated condition, complaining of great thirst and other symptoms of diabetes. It was stated that he had received a blow on the head some four or five months previously, and that he had suffered ever since from headache. The urine was full of sugar. He died in a state of diabetic coma two days after his admission. At the necropsy the body was found greatly wasted and post-mortem rigidity very pronounced. The stomach was considerably dilated, and its walls were very thin. The liver was pale, but a large quantity of blood poured out from the cut veins. Brain: The dura mater was strongly adherent to the upper part of the occipital bone. There was a slight amount of subarachnoid effusion. The pia mater beneath the cerebellum was much thickened and congested, especially the portion, forming the roof of the fourth ventricle. The lateral ventricles were dilated and contained fluid. The iter e tertio ad quartum ventriculum was considerably dilated, and the usually smooth surface of the floor of the fourth ventricle presented a large number of minute glistening elevations, the whole resembling the ground-glass appearance of the ependyma so characteristic of general paralysis. A small hæmorrhage occupied the central sulcus 4 mm. above the lineæ transversa and 16 mm. above the calamus scriptorius.

CASE 4. *Tumour of the Left Cerebellar Lobe; Convulsions, with Rotatory Movements from Left to Right; Ventricular Effusion; Glycosuria.*—Henry M——, aged seven years, was admitted into the infirmary complaining of pain in his head of two years' duration. Twelve months after the commencement of the symptoms vomiting and staggering gait made their appearance, and the attacks of headache became much more severe. On admission he walked unsteadily, had severe occipital pain, which occurred in paroxysms, at the height of which he generally vomited. The knee-jerk was absent. The optic discs were markedly atrophied. There was no nystagmus, nor was there any retraction of the head. The urine contained sugar, but not in large quantities; the specific gravity was never above 1025. The day before his death two fits occurred; he lost consciousness during the convulsions, and each time *rolled from left to right*. At the necropsy the body was found to be well nourished; rigor mortis marked. The head only was examined. The convolutions of the convex surface were flattened. The veins were full. The pia mater covering the pons was thickened. The optic nerves were greyish and firm. The lateral ventricles were considerably dilated, and contained fluid. The veins of the ependyma were distended. The left hemisphere of the cerebellum contained a firm tubercular growth the size of a walnut. This tumour extended slightly over the middle line to the right side, and to within half an inch of the lateral surface of the left. The effusion had evidently reached the fourth ventricle.

CASE 5. *Complete Hypoglossal Paralysis depending upon a Lesion in the Left Internal Capsule.*—A labourer, aged fifty, had what was described as a "stroke" three months before he came under observation. Consciousness was not lost in this attack, and the only result was paralysis of the right side of the face, with inability to protrude the tongue, and difficulty of articulation, so that his friends did not understand what he said. Seven weeks subsequently he had another attack, in which his face became more profoundly paralysed and his right arm and leg were affected. He was now, it was stated, deprived completely of his speech. On admission into the infirmary the right leg and arm were almost helpless and late rigidity was commencing. The right side of the face was also paralysed, and the power of protruding the tongue was lost. Even efforts such as are wont to arouse automatic tongue movements failed—such, for example, as holding a lozenge near his lips, and at the same time showing him what was required of him. For some weeks he lay in this condition; but by degrees the general nutrition failed, the tongue as it lay in the mouth became foul and covered with a thick dry crust, and he began to refuse food. In a short time he died, without the development of any further seizure. At the post-mortem examination a considerable quantity of fluid escaped when the dura mater was opened. The superficial veins of the hemispheres were much congested. The arachnoid was cloudy, and enclosed some serous effusion. The basal vessels were much degenerated—viz., the vertebrals, basilar, posterior cerebrals, and especially the middle cerebrals. The lenticulo-striate branch of the left middle cerebral was completely blocked and thrombosed. A patch of softening was found occupying the posterior part of the caudate nucleus and adjacent anterior portion of the optic thalamus, as well as the central division of the fibres forming the internal capsule. The right hemisphere appeared to be free from disease.

In this case the aphasia scarcely corresponded with Lichtheim's published views on the variety of aphasia that results from a lesion of the afferent fibres connecting the "speech centres" with the medulla,[1] inasmuch as the patient had not quite lost volitional speech or the power of repeating words. He could always, for example, when asked his name, mumble it in such a fashion that anyone familiar with its sound could recognise the attempt at articulation, and efforts were made to reply to other questions in the same imperfect manner. The case is important as showing that the impression that "a bilateral lesion is required to produce paralysis of the motor organs" (of speech)—to quote from a recent writer—is not always the case, for in this particular instance bilateral movements of the tongue would appear to have been excited by innervation from the left hemisphere alone.

(To be concluded.)

[1] Brain, January, 1885, p. 449.

MANCHESTER ROYAL INFIRMARY.—An addition has just been made to the collection in this infirmary of portraits of distinguished members of the medical profession, by the presentation by Mr. Charles Jordan of memorial busts of two eminent surgeons, Charles White and Joseph Jordan, who did much during their lifetime to advance the importance and value of the charity to the city.

CASE OF

SUCCESSFUL REMOVAL, PER VAGINAM, OF A CANCEROUS (AND PREGNANT) UTERUS.

BY J. GREIG SMITH, M.A., F.R.S.E.,
SURGEON TO THE BRISTOL ROYAL INFIRMARY.

THE patient, a well-nourished woman, aged thirty-four, was admitted to the Bristol Royal Infirmary in September, 1886, with characteristic and well-marked signs of uterine cancer. She had had eight children (twins on two occasions), and her frequent and excessive hæmorrhages had been attributed to miscarriages. It is very probable that she had had miscarriages; indeed, it was suspected before operation that she was pregnant, though bleeding had been almost continuous up to the date of admission.

The epitheliomatous growth was for the most part confined to the cervical canal. Hard cauliflower granulations sprouted from the os, and the whole of the posterior lip was occupied by nodular growths, which bled freely on being touched. The vaginal portion of the cervix and the growth in it together were in bulk about as large as a tennis-ball. The contiguous vaginal surfaces were healthy; the uterus was freely movable, though it was considerably enlarged (the sound entered four inches); signs of implication of glands, broad ligaments, bladder, or rectum were absent; and the patient was in good condition, though anæmic. On the whole, it seemed to be a suitable case for operation. The decision was not definitely to remove the whole uterus, but to begin as if for supra-vaginal amputation, and, if this operation did not seem radical enough, to perform total hysterectomy. The first steps of partial amputation, as I perform it, are identical with the first steps of total amputation. When the cervical mucous membrane is detached the finger can reach as high as the internal os outside, and, being in actual contact with uterine fibres, can diagnose the condition with accuracy. Pregnancy would have little influence either way; probably its existence would favour complete removal. After partial amputation abortion would take place, and the bleeding and discharging would add to the patient's risk.

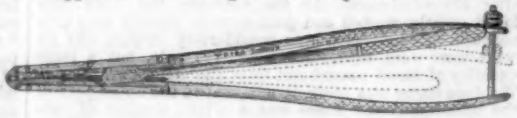
Preliminary cleansing of the parts was carried out for three days before the operation, and immediately before operating the whole of the genitals were washed with 1 in 20 carbolic lotion. The patient was placed in the lithotomy position. The cervix was caught in strong vulsellum forceps, which were entrusted to an assistant, who pulled down the uterus, and manipulated it according to direction. The mucous membrane surrounding the cervix was divided all round by scissors at a safe distance from the new growth, and was dissected upwards by scissors and fingers, catch forceps being placed on bleeding points. As high as dissection could be carried without entering the peritoneal cavity induration was felt in the uterine tissue; it was therefore decided to remove the whole organ. The peritoneum behind was perforated by the finger close to the uterus, and enlarged laterally by tearing. In front the peritoneum was opened by pushing a Lister's sinus forceps through it close to the uterus, and the opening enlarged sufficiently to admit the finger by separating the blades. The finger, inside the abdomen, readily tore the peritoneum from the uterus close down to the broad ligaments. I then endeavoured to hook the finger over the top of the broad ligaments so as to place on them the clamp forceps which I had some time previously devised for the purpose. But the ligaments were so much elevated by the enlargement of the uterus that I could not reach high enough; and, besides, they were so voluminous that the clamp could not have efficiently grasped them; I therefore proceeded to antevert the uterus. This was done by taking successive grips of its anterior surface by means of powerful catch forceps, placing one above the other, and so gradually and completely anteverting the whole organ. A sponge had been previously placed in the abdominal cavity through the posterior opening to keep the bowels out of the way and absorb any fluid that might be effused. The fundus now lay between the labia, distending the vagina. By dragging it to one side and retracting the labia the top of one of the broad ligaments could be brought within reach. A powerful Wells's forceps was made to grasp as much as possible of the ligament (including the Fallopian tube and round ligament of course) close to the uterus. A corresponding depth of the ligament was then caught in a silk ligature at a distance of about a third of an inch from the forceps and divided between. This division enabled the uterus to be drawn down a little further. Three other ligatures were successively placed in the same way, and one side of the uterus was thus fixed, the catch forceps being left on the uterus. The same proceeding was then carried out on the other side, and the uterus was removed. The vessels in the broad ligament were very large and very numerous, and it was deemed wise to leave the catch forceps attached to the ligaments where the vessels were most numerous, so as to give extra security against hæmorrhage. These were removed after twenty-four hours. The sponge was now removed from the abdominal cavity; a clean sponge reintroduced removed all blood clot, and at the same time pulled the peritoneal flaps downward over the mucous flaps, so that the rawed surfaces lay in contact and the serous surfaces were apposed. No stitches were used. The vagina was finally cleansed; iodoform powder was insufflated, and pure boroglyceride smeared all over the external parts. A small plug of iodoform wool in a fold of carbolic gauze was placed in the vagina to fix the forceps. The operation occupied about forty minutes.

Next day the vaginal plug was taken out and the forceps removed. In the track of the forceps an ordinary glass drainage-tube was carried inside the abdominal cavity, the end lying outside the vulva. By means of an irrigator the cavity was washed out through the tube with warm boroglyceride solution every six hours. Before each cleansing the urine was drawn off; then the genitals were washed, the tube isolated with sal. alembroth wool, and plugged with a roll of wool, which at once acted as a capillary exhauster and as an antiseptic. After four days the tube was removed, as there was no discharge; but vaginal irrigation was continued for a few days longer.

The patient's recovery was most easy and straightforward. On the second day there was some tympanites, which was relieved by a turpentine enema. On the third day a saline purge was given, followed by another enema, and thereafter tympanites gave no trouble. There was no sickness. Her progress was, in fact, as rapid and as satisfactory as that seen after an ordinary ovariotomy.

The uterus, on bisection, was found to contain two fœtuses and their membranes, about six weeks or two months old. But its measurements were larger in proportion, as might be expected. The cancerous growth in the cervix was much crushed by forceps, and the fundus and sides were also compressed and flattened by instruments, so that the measurements were inexact. Roughly its length was about seven inches, the other dimensions being proportionate. The disease extended up the whole of the cervical cavity, and abutted on the fœtal membranes.

Appended is a drawing of the forceps which Weiss made



for me some months ago for the purpose of clamping the broad ligaments. It consists of two grooved blades, which lock over the top of the broad ligaments, and are tightened by a screw at the end of handles which lie in the vagina and pass outside the vulva. On the inner aspect of the clamp grooves are placed to carry a small knife, with its edge set obliquely to the handle. When pushed up the grooves it cuts the broad ligament away from the uterus. The clamps, one on each side, are placed and tightened, and when the circulation is thus completely stopped the uterus is cut loose by simply pushing the knife up the grooves on the clamp, first on one side and then on the other. The compressing edges of the clamps are deeply slotted to prevent the possibility of their slipping; elsewhere they are rounded and smooth so as to avoid irritation of peritoneal surfaces. It matters little whether the anterior or the posterior blade is first placed; only the grooves must be placed towards the uterus.

It has been abundantly proved that crushing or compression maintained for forty-eight hours on vessels the size of the uterine arteries is efficient and trustworthy for per-

manent hæmostasis. The instrument is intended to avoid the chief difficulty in kolpo-hysterectomy—the application of ligatures to the broad ligaments. It also renders the operation an extremely easy one. On the dead body it is possible to remove the uterus in five minutes and leave the parts in a satisfactory surgical condition.

Remarks.—The latest statistics of kolpo-hysterectomy show, in a total of 350 cases, a general mortality of about 26 per cent. This mortality is steadily decreasing. In the hands of specially skilful operators the percentage of deaths is under 10; indeed, a hundred cases could be gathered as representing the whole of the operations of four men, with a death-rate of only six. Brennecke and Schede can show records of 18 and of 16 operations respectively, all successful; Fritsch has lost 2 out of 24; Martin is well through his second 50 operations, with a mortality under 9 per cent.; and Sänger, with a few others, have almost equally brilliant results.

The amount of literature which has accumulated around the operation is truly enormous. The variations in details are very numerous and very confusing; but unessential details are being eliminated, and the methods are now settling down to a few definite practices which are followed by the most noted operators. The essential details in the operations I would shortly describe as follows:—1. Thorough preliminary cleansing of the accessible genital parts. This ought to include the vulva and labia, as well as the vagina and cervix, and ought to be particularly exact in the deep sulci of the external parts, which are so liable to harbour filth. 2. A bladder and rectum perfectly empty and collapsed. A sound in the bladder is quite unnecessary. The forefinger, after a little practice on the cadaver, can readily feel and recognise the bladder wall, and easily diagnose its relations. 3. Circular denudation of the mucous membrane surrounding the cervix, and separating it, close to the uterus, as high as it will go without force. 4. Perforation with finger or blunt instrument of the peritoneum behind and in front of the uterus, and close to that organ. If a blunt instrument is used the bowels cannot be wounded; and if perforation is made close to the uterus, the rectum cannot be wounded behind nor the bladder or uterus in front. The peritoneum is to be separated from the uterus laterally as far as the broad ligaments, and no further. 5. Efficient surgical hæmostasis of the vessels in the broad ligament: This may be done by temporary forcipressure, or by compression instruments such as those I propose, the uterus being cut away between them. If deligation be decided upon, inversion of the uterus renders the method easier. Silk is a trustworthy ligature, and simpler of application than any other. 6. Apposition of serous and of raw surfaces. This may be effected by simply pulling out of the abdomen into the vagina a sponge placed there at an early stage of the operation; stitches are unnecessary, as the parts lie naturally in apposition. This arrangement of flaps permits of free drainage from the peritoneum, and from the denuded surfaces back into the vagina. 7. Abdominal drainage per vaginam for a few days is expedient, if not necessary. If clamp forceps are used drainage may be dispensed with. A simple straight tube is quite efficient.

Bristol.

NOTES OF A

CASE OF ACUTE DIFFUSED MYELITIS; RECOVERY.

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DISEASES of the spinal cord are now attracting so much attention that the notes of the following remarkable case may be perused with interest. It is probably seldom that recovery—complete recovery—takes place in so severe an attack as that which is the subject of these notes. The absence of the complications in the chest and on the surface, which so commonly occur in cases of myelitis, was greatly due to the high character of the nursing which the patient was fortunate in receiving. She was unable to lie on her side on account of the pain which it occasioned. She was therefore kept with her shoulders raised as much as possible, and moved frequently. The nates were carefully protected with pads of cotton-wool, and the utmost cleanliness was observed. At one time the paralysis was so complete that she was unable to move any part of her body, and the respiration was of the shallowest possible character. Careful inquiry elicited an exposure to cold as the cause of the mischief. But there was no reason apparent why the spinal cord should specially suffer. Much care was taken with the use of galvanism, and its effect on the patient was carefully watched; I have seen much mischief occasioned by the too early use of it in cases of myelitis. The notes appended by Dr. Clifford Allbutt, who saw the case with me, and by Dr. Gowers, who has been kind enough to criticise the case from my notes, will be read with interest

Miss ——, aged sixty-five, was first seen on Oct. 25th, 1885. A short, spare woman, hair white, of a kind disposition, cheerful, and thoughtful for others. Has enjoyed good health; father suffered from gout. Called me in to see her for pain in the lower end of the œsophagus on swallowing, "as if something had stuck in her throat." There were symptoms of subacute gastritis. In the course of three days the gastric symptoms were relieved, but the pain on swallowing remained. Right sciatica now came on, followed next day by extension to the left side, and the day following she faltered in rising from her seat. I sounded a note of alarm, and requested a consultation with Dr. Clifford Allbutt. She rapidly became much worse. The legs became paralysed, the arms painful down the course of the main nerves, the breathing shallow, and there was a feeling as of a cord being round the waist and also round the legs. When her legs were lifted from the bed they "flopped about." There was great weakness of hands and arms. Bowels confined; urine escaped involuntarily. The pain in the limbs was much worse after movement. There was considerable cerebral excitement. My diagnosis was "spinal meningitis—myelitis." I gave her bichloride of mercury, iodide of potassium, and cinchona. This was her condition when on Nov. 3rd I saw her with Dr. Allbutt. We then examined her together. She was able to say which leg was touched, and felt the difference in succession when touched with sharp points. When seen it was afternoon, and she expressed herself and appeared slightly better than she had been in the morning. This suggested to Dr. Allbutt the idea that the case *might* be one of peripheral neuritis, and inquiry was made as to the patient's habits, with negative results. But for this he would have diagnosed acute ascending paralysis. The improvement was, however, most transient. She rapidly got worse and could not raise her head, and when it was raised it moved powerlessly about. The patient's breathing was shallow in the extreme, and hurried. The pains in the limbs subsided as the paralysis increased. The fæces had to be scooped out of the rectum by the nurse. The urine would only flow through the catheter when the body was firmly pressed by the hand. When either knee was touched she could tell the difference, but if one was touched after the other she was not aware of the change. When at the worst, she appeared unable to see the night through on account of the inability to breathe. She was then entirely powerless from head to foot. There was extreme emaciation. I gave her dilute phosphorus acid, ammon. carb., and cinchona, with a draught of hydrate of chloral with bromide of ammonium at night, as she could not sleep. Reflex contraction was lost at the knee and the sole of the foot. From the worst point she gradually improved. The breathing gradually became deeper, then she could swallow a little better, then move a finger. Her hands, as she improved, were held straight (unbalanced action of extensors), and were stiff and tremulous, and felt soft and puffy. She gradually got power of control over the bladder; first she could empty it herself when the catheter was introduced, then she could control the action of it. The urine had become muco-purulent; this improved. The legs could after a time be moved, "after the nurse had worked them about freely first." Power returned in the flexors of the legs before the extensors; the reverse in the hands. I changed the medicine to bromide of ammonium with oxide of zinc, with sleeping draughts of morphia and belladonna. There had been no indication of lung mischief apart from the paralysis. The temperature had not exceeded normal. There was no facial paralysis. This report is to Dec. 11th, 1885.

On Dec. 21st the report was as follows:—Can move her left hand above her head. Able to sit on the edge of the bed with assistance. Has not passed urine involuntarily for the last fortnight; it has been drawn off by catheter. More control over the rectum; fæces have not now to be scooped out. Can raise her thighs to a right angle. Has very

little power over the muscles of the leg, and the feet fall. When the front of, say, the left leg is rubbed, can tell which; if the right be then rubbed also with the other, does not detect any difference; then when the right is continued to be rubbed and the left is let alone, is not aware of the change. Has all along, with the improvement, suffered from painful sensations over her body, which she has spoken of as "fidgets"; these were almost continuous, but have now changed into paroxysms, more severe while they last, but with intervals of ease. Along with the bodily improvement her mind has become alienated, and her disposition entirely changed. She screams at the top of her voice frequently through the night and day, and when told how seriously this interferes with other people's comfort, says she does not care; it is nothing to her if they are kept awake all night by her noise. As she has become able to move her hands, &c., they have become subject to fits of uncontrollable movement after voluntary effort. There has throughout been no tendency to bedsores; very great care has been taken to guard against this.

March, 1886.—Has had a long, weary time of it. Can now walk about her room; at first with assistance, now without. Can feed herself, and write letters with great effort. Has still pain after movement, and general feeling of distress all over her body. Disposition again natural. Bowels usually moved without enema, with a pill every other night. Has severe pain after passing urine. Small quantities of pus come from the vagina (there had been symptoms of a small pelvic abscess which burst through the vagina). Legs are plump again; pain in the joints, knees especially, much less. There had been considerable redness about the right patella.

The patient subsequently went on improving. Great care was taken with the muscles to prevent degeneration—by movement, rubbings, galvanism, &c. The medicines during the later period of convalescence were nux vomica, arsenic, iron, and valerian. Went away to the seaside and elsewhere for change of air, and returned home by midsummer well.

My patient had the advantage of first-rate trained nurses from the Leeds Nursing Institution, and I wish to acknowledge their care and faithful discharge of their duties, without which she could hardly have escaped the various accidents which are liable to occur in such a case. From time to time I reported her condition to Dr. Allbutt, and he has kindly favoured me with the following criticism:—"As the later history of this remarkable case unfolded itself, of course I gave up the idea of peripheral neuritis. Ascending paralysis (so-called Landry's palsy) was set aside for several reasons, among others the profound anæsthesia, the palsy of rectum and bladder with cystitis, and the age of the patient. It is clear that the disease involved the whole thickness of the cord, including the grey matter, and was probably a myelitis—either an ascending diffused myelitis, or a myelitis ascending in patches. In any case the recovery is very remarkable. The symptoms of returning health in the cord are full of interest."

Dr. Gowers, who has seen my notes, has kindly favoured me with the following criticism of the case founded upon them, which is too interesting and valuable to be omitted. Dr. Gowers remarks on the absence from the report of "some information as to the electric irritability of the muscles at various stages, because this is an important element in the diagnosis." "The diagnosis rests between true acute ascending paralysis and acute ascending disseminated myelitis, and I should incline to the latter, partly on the ground of the cerebral complication, which points to either meningitis or to disseminated inflammation of the cortex. Coincident cerebral and spinal inflammation is not rare, while the brain functions are usually—it is said always—unimplicated in true ascending paralysis. At the same time no malady is sharply defined, and aberrant forms are met with, differing more or less widely from the customary type."

AN UNHEALTHY HOUSE.—At the Nottingham County Court a woman was recently sued for the rent of a cottage in which she had resided. The defendant admitted the debt, but alleged that, owing to defective sanitary arrangements, the place was unfit to live in, and she presented a counter-claim for medical charges and funeral expenses in respect of a child whose death was proved to have been caused by an illness arising from defective drainage. The judge gave judgment for the rent due, and allowed the counter-claim, on the ground that the cottage was not reasonably fit for habitation.

WOUND DIVIDING THE TENDO ACHILLIS AND OPENING THE ANKLE-JOINT.

SUTURE OF TENDON; RESULT.

BY A. G. P. GIPPS, M.R.C.S., &c.

F. S——, a carpenter, was working with an adze on July 30th last, when the tool slipped and struck him over the posterior and inner portion of the left ankle-joint. The result was a transverse wound of about 1½ in. long, dividing the tendo Achillis immediately above its insertion into the os calcis, "nicking" the edge of the tendon of the flexor longus pollicis, and the corner of the adze entering the ankle-joint. There was also considerable bleeding from a branch of the posterior tibial artery, divided close to its junction with the main artery. The patient was a very muscular man and the cut tendon at once receded some distance into the calf of the leg. He was as soon as possible placed under the influence of chloroform, and, the parts having been thoroughly examined, I made an incision two inches and a half long at right angles to the wound, and parallel to the edge of the cut tendon, this being required before it was possible to catch hold of the upper end of the tendon. When this could be grasped by the fingers, it was forcibly pulled down till it was almost in contact with the lower end, when three silver sutures were passed through both ends and secured by twisting. The wounded vessel had previously been secured by torsion; the silver sutures were cut off long. The whole wound and joint were now freely syringed out with a solution of perchloride of mercury (1 in 1000); the skin wounds were brought together with silver wire, leaving only the lowest portion of the wound open, through which were brought the ends of the wires used to unite the tendon, and which served for drainage purposes. The whole wound was well dusted with iodoform, covered with a pad of lint wrung out in the mercurial solution, and the joint surrounded with absorbent wool. The limb was placed on a metal back splint extending above the knee, and the foot secured to the foot-piece in a state of extreme extension, and the patient put to bed.

Aug. 6th: Wound dressed for the first time since the operation (a week). The lint over it was found dry, the wound quite aseptic, and no discharge of any kind present. The upper part of the wound was healed, and all the wires in position. The solution of perchloride of mercury was again used, the wound dusted with iodoform, and the whole replaced as before.—13th: Wound re-dressed. No discharge of any kind. Except at the spot where the inner sutures project, both wounds have united entirely. The skin sutures were removed, and as any attempts to get at the sutures in the tendon only produced a good deal of bleeding from the newly-formed material, these were pulled out as far as possible and cut off short, the small unhealed point being dressed as before.—17th: As the ship was going to sea, the foot was taken down and readjusted, the foot being flexed in order to stretch the tendon. Patient can move the joint himself, and the reunited tendon can be felt in continuity as he extends his foot. There is but little stiffness in the joint itself.—25th: The cicatrix being now firm, everything was removed from the joint, and the patient told to work it freely in bed.—31st: Patient up to-day, and commenced to walk about. He has complete use of the joint as far as movement goes in all directions, and complains only of some weakness and a feeling at present of insecurity.—Sept. 9th: Patient can now walk fairly well, go up and down ladders, &c.

Remarks.—With regard to the temperature, the first two nights it went up to 100°, being normal in the mornings. On the third day it was normal, and remained so for the rest of the time. The bowels were opened on the eighth, tenth, eighteenth, and twenty-fourth days, to avoid all possible disturbance; after that they were allowed to act naturally. With regard to the silver sutures cut off and left in the tendon, so far no effect has been felt from them: firm pressure gives no sensation of "pricking," so they are probably completely buried. The tendon has complete and free play, and the wounded ankle-joint its natural mobility. The treatment by means of the solution of the perchloride of mercury and iodoform proved completely antiseptic, its

simplicity and easy preparation being a great boon in a ship. During the patient's confinement to bed he was kept in a canvas swinging cot by an open port.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON THE CAUSE AND CURE OF A FORM OF BACKACHE.

BY SIR JAMES SAWYER, KNT., M.D. LOND., F.R.C.P.,
SENIOR PHYSICIAN TO THE QUEEN'S HOSPITAL, AND PROFESSOR OF MEDICINE IN QUEEN'S COLLEGE, BIRMINGHAM.

EARLY in the year 1881, in a note which was published in a weekly professional journal, I asked the attention of my brethren to a form of backache which had not, so far as I know, been described before.[1] I desire now to refer to this subject again, and to record that my further experience in practice has confirmed my previous remarks upon the point in question.

Subjective symptoms are always important diagnostic signs, and they are often clear therapeutic indications. Amongst such sensations backache is frequently a leading symptom, and also one which is pressingly dwelt upon by patients. Of backache there are divers forms. Dr. George Johnson, in an able clinical lecture, and Mr. William Squire, in a practical memorandum, have drawn the attention of the profession to many of these.[2] But they have not mentioned a variety of backache in which the cause of the pain is traceable to the condition of the large bowel. I find that some patients complain of a pain, aching, dull, and heavy in character, and extending "right across the back." When asked to point out its position, they indicate this by carrying a hand behind the trunk and drawing the extended thumb straight across the back, in a transverse line, about half-way between the inferior angles of the scapulæ and the renal region. This pain I venture to attribute to a loaded colon; I conclude I have correctly found its proximate cause in fæcal accumulation in the large intestine. I have found it disappear after the exhibition of an efficient cathartic. This form of backache is a concomitant of habitual constipation, and is especially significant of the alvine sluggishness of sedentary persons. In such a condition, as I have stated elsewhere, I find aloes, given in combination with iron, to yield the best results.[3] We owe the valuable suggestion of combining iron with aloes, when aloes is given for laxative purposes, to the late Sir Robert Christison. He showed that the cathartic property of aloes is much increased by its combination with sulphate of iron. Dr. Neligan, Dr. Kent Spender, and Dr. David Bell have confirmed this experience. I prefer socotrine aloes, and I give of it one, two, or three grains in a pill, combined with a quarter of a grain of sulphate of iron and one grain of extract of hyoscyamus. This pill should be taken every night. We must aim at producing a full alvine evacuation after breakfast. When a saline cathartic is indicated, I usually employ the old-fashioned Rochelle salt. This "goes" well with tea, coffee, or cocoa. One or two teaspoonfuls may be taken at breakfast, dissolved in a large cupful of one of these beverages.

Birmingham.

CASE OF COCAINE POISONING.[4]

BY C. S. KILHAM, L.R.C.P., &c.

ON NOV. 9th, 1886, at 12.10 noon, John B—— accidentally took 4½ grs. of cocaine hydrochlorate in the form of solution. At 12.30 he was seized with severe cramps in the stomach, nausea, throbbing and feeling of bursting in his head, failure of eyesight, loss of use of his legs, incoherence of speech and confusion of ideas, and drowsiness, but could always answer questions if roused. No delirium; appeared as if drunk, and got quite helpless. Brandy was given to him, and he vomited after it, but only the remains of food. About 12.50 he commenced sweating most profusely, shirt &c. being soaked through, perspiration streaming down his face and body, and his head steaming. Pupils were normal and equal. No loss of taste. The sweating lasted some time, and was succeeded by very severe prostration, shivering, and feeling of impending death. At intervals the patient had severe cramps in the stomach, with retching and vomiting of a quantity of clear mucus, which relieved the pain. About 1.15 P.M. the pulse became intermittent (missing every fifth beat). This was accompanied by cyanosis of the face, and intense feeling of suffocation over the cardiac region. Relief was afforded by sinapisms. The pulse varied from 80 to 86, never more, and became gradually regular. About 1.45 P.M. he began to have cramps in the legs and feet (especially on dorsal surface of right foot), and tingling and numbness in both hands. Later on the pupils became dilated. The vomiting and cramps ceased about 4 P.M. (unless food was taken), but the drowsiness, throbbing of head, and prostration continued up to 6 P.M., when the patient began to get warm and feel relieved. The improvement continued, and he could be moved at 8.30 P.M. There was great weakness, with swimming of head all night.

Next day there was still weakness, continual vomiting, a dry leathery feeling in the mouth, with loss of taste, partial loss of power in the legs, and tingling and numbness of the fingers, especially of the right hand. These symptoms commenced nearly thirty-six hours after taking the cocaine, and most of them disappeared in twenty-four hours. The loss of power in the legs lasted three days, and the tingling and numbness of fingers longer. He was not able to write a letter until the sixth day, as he could not feel the pen between his fingers before. An emetic was at first given, with sinapisms over the heart and stomach; afterwards warmth and stimulants (principally compound spirit of ammonia).

Remarks.—The solution of cocaine had been made at least twelve months, but appeared all right. The patient was in the habit of taking ¼ gr. of cocaine for neuralgia of the stomach. The dose taken was 4½ gr. of hydrochlorate of cocaine. The official dose is up to 1 gr. Martindale, in his book on "Coca and Cocaine, &c.," mentions two cases where larger doses were taken. In one case (of attempted suicide) 23 grs. of cocaine were taken without "seriously injurious effect." In the other case 32 grs. of cocaine were taken within three hours, but the symptoms varied considerably from those in the case under notice. The most remarkable symptoms were the severe sweating, the intense prostration, and the intermittent pulse. The last symptom I have not seen mentioned before.

Sheffield.

A CASE OF RETRO-ŒSOPHAGEAL ABSCESS, CAUSING DEATH BY PRESSURE ON THE TRACHEA.

BY PHILIP D. TURNER, M.B. LOND.,
LATE HOUSE-SURGEON, VICTORIA HOSPITAL FOR CHILDREN.

I AM indebted to Dr. Julian Evans for permission to publish this case, which occurred at the Victoria Hospital in April last.

T. H. M——, an infant, aged three months, had been attending the hospital as an out-patient for some weeks for congenital syphilis. It first came towards the end of March with a strongly marked syphilitic eruption, which was followed in the beginning of April by the appearance of multiple subcutaneous phlegmons in the limbs. On April 19th there was an attack of dyspnœa, which passed off in a few minutes. On the 22nd, as the mother was bringing it to the hospital, the child was seized, according to her account, quite suddenly with dyspnœa, and became of a very dusky colour. She hurried to the hospital, where it was at once admitted. There was, on admission, great dyspnœa, with considerable retraction of the thorax; colour very dusky; pulse rapid and feeble; voice not at all hoarse. Hot fomentations were applied to the neck, and the child placed in a steam tent. An hour after admission the respirations became more unfrequent and gasping, the colour very bad, and the pulse scarcely perceptible. Tracheotomy was therefore at once performed. After the operation the child rallied considerably. The recession almost ceased and the colour improved. About three hours later, however, the breathing got worse, the recession increasing again, and

[1] British Medical Journal, Feb. 19th, 1881.
[2] Loc. cit., Feb. 12th, 1881.
[3] Contributions to Practical Medicine, p. 48. Cornish Brothers, 1886.
[4] Read before the Sheffield Medico-Chirurgical Society, Nov. 26th, 1886.

a cold sweat appeared on the forehead, the patient becoming very feeble. There was not any great difficulty in swallowing, and the child took milk and brandy with avidity. The symptoms increased in severity, and death took place four hours after the tracheotomy, and about six hours after the onset of the dyspnœa.

Necropsy.—Heart: Left ventricle contracted and empty. Right side flaccid and distended with post-mortem clot. Heart substance and valves normal. Lungs: Marked emphysema of anterior margins and upper lobes. Lower lobes of a dark purple colour, devoid of crepitation; portions cut off sinking readily in water. Liver about normal size. Intralobular veins distended; substance rather tough. Spleen about twice the normal size; friable, but somewhat tougher than natural. Kidneys normal. On endeavouring to dissect out the trachea and œsophagus, the knife entered an abscess cavity on the right of the latter. On further examination, it was found that there was an abscess the size of a large walnut in the areolar tissue behind the œsophagus and lower part of the pharynx. It had no distinct sac posteriorly, being bounded by the bodies and transverse processes of the vertebræ, no disease of which could be detected. The abscess extended from the level of the cricoid cartilage to within a quarter of an inch of the bifurcation of the trachea. On opening the larnyx and trachea from the front, no disease could be found in them. The tracheotomy wound was low, commencing about the third ring of the trachea. There was slight flattening of the trachea.

Remarks.—The case appears worthy of record both on account of the rarity of the condition as a cause of death, and of the difficulty of diagnosis in consequence of the low position of the abscess in the neck. A remarkable feature of the case, also, is the almost entire absence of dysphagia. The subject of retro-pharyngeal abscess is treated at some length by Despines and Picot ("Traité des Maladies de l'Enfance"), who state that dysphagia is the most prominent symptom, placing it before dyspnœa. The dyspnœa might be referred to reflex spasm were it not that it returned (with recession of the chest, &c.) after tracheotomy had been performed. Death was probably immediately due to the condition of the lungs &c., as much as to the obstruction. No cause for the abscess was discovered, so it was probably due to suppuration of the post-pharyngeal lymphatic glands which exist in infants, and are, according to Bokai, the commonest cause of retro-pharyngeal abscess. It is interesting to note that the child had suffered from multiple subcutaneous phlegmons only a week or two before its death.

NOTE ON HYSTERECTOMY.

BY LAWSON TAIT, F.R.C.S., M.D., &c.

THIS operation, which only a few years ago looked as if we never should achieve with it the success which alone could justify its continuance, has now, thanks to a large number of small improvements, come within the limits of ranking alongside the operation for removal of ovarian tumours, and, according to my own recent experience, has become almost as successful. It is strange that this success should have been arrived at under conditions almost the exact opposite of those which have contributed to our success with ovarian tumours. In the latter it has been the ligature and its displacement of the clamp which have brought about our triumph. In the removal of uterine tumours, on the contrary, it is the displacement of the ligature by the clamp which has given us the great success.

More than one writer in your columns, in speaking of these operations, has stated that the clamp devised by myself some years ago forms the best method of dealing with the uterine pedicle. This for many reasons I think still to be correct, but there is one reason which makes Kœberlé's form of clamp much superior, and I have therefore discarded my own instrument in favour of Kœberlé's. I have, however, found it necessary to make in the latter two very important modifications, and these seem to make the instrument as perfect as anything we are ever likely to possess. The difficulty with my own clamp is that its power is so enormous that it is difficult to estimate exactly the amount of constriction which it is exercising, and the arrangement, therefore, becomes a difficult one to adjust, specially if it has not been tightened enough, and hæmorrhage should set in a few hours after the operation. At such a time only the nurse may be present, and nurses are not to be trusted to tighten up my clamp. The modification, however, which I speak of in Kœberlé's instrument is one which may be tightened by any nurse, even the most inexperienced, without any risk.

The defects in Kœberlé's original instrument are, first, a movable head, which has an inconvenient habit of dropping off at most inopportune times; and, second, the button upon which the wire is fastened necessitates a twisting of the wire, which loses time and makes it extremely difficult and inconvenient to haul in the slack of the wire, if that should become necessary. I have, I think, completely obviated these two difficulties by making the screw and the head in one piece, and so arranging it that the point of resistance is at the end of the screw, and not in a collar. The new method of fastening the wire is easily explained. It is exactly on the same principle as the cleats of a Canterbury hammer arranged for withdrawing nails. There are two cleats right and left, the wire is firmly bitten in each of them, no loop being in the least necessary, and a slight turn of the wire outwards renders this fastening absolutely secure. I am now in the habit of removing the clamp and wire on the third or fourth day, leaving the pedicle entirely to the care of the needles, and this enables the dressing of the stump to be much more easily effected.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

A CASE OF GENERAL TUBERCULOSIS; NECROPSY; REMARKS.

(Under the care of Mr. FREDERICK TREVES.)

THE following case of general tuberculosis will be found to present several points of considerable interest, and is a good example of a form of the disease. We would draw attention to the remarks by Mr. Treves, especially to those bearing on the etiology of some forms of tuberculosis, the condition of the spine, and of the right knee-joint.

The patient, a young man, aged nineteen, was admitted on Sept. 30th, 1886, suffering from disease of the right knee, paraplegia, and great emaciation. He died on Dec. 6th, 1886. The account of the case can be simplified by commencing with a description of the post-mortem examination.

Necropsy.—The body was extremely emaciated. Five large and deep bedsores had formed over the sacrum and the great trochanter. The former bone was bare. A lymphatic gland in the right groin and another in the left side of the neck had sloughed out, and had left deep holes, surrounded by thin, purple, and undermined skin. There was a general but slight enlargement of the cervical, inguinal, and axillary glands. The right knee-joint was filled with pus. The cartilage was gone over the inner half of the patella, and over both condyles of the femur. It was fairly sound over the tibia. The bared bone was

in places carious. The crucial ligaments were destroyed. The joint was flexed, but not dislocated. The other articulations in the body were normal. The left epididymis was converted into a caseous mass. The left testis was nearly wholly caseous, and in the centre was a collection of thick purulent fluid. The right epididymis was caseous, but the right testis appeared to be normal. Both the vesiculæ seminales were blocked with caseous matter. A like material occupied a considerable part of the prostate. The bladder appeared to be in every respect normal. Both kidneys were studded throughout with miliary tubercles. The anterior parts of the bodies of the last two cervical and the first four dorsal vertebræ had been destroyed by caries. The inter-vertebral discs had also disappeared to an extent corresponding to that of the caries. There was no anterior abscess, nor, indeed, was any real pus found in the vicinity of the disease. There was no angular deformity of the column. The spinal canal opposite the affected dorsal vertebræ was occupied by a soft caseous mass. By means of this the cord had been compressed, and in this region it was found greatly softened. Both lungs were studded throughout with miliary tubercles. Here and there was a caseous mass. There were no cavities. There had been slight pleurisy (old) on one side. The peritoneum covering the stomach was dotted over with miliary nodules. It is remarkable that no other part of this membrane was affected. The brain and its membranes were normal, as were such viscera as have not been already referred to.

Clinical history.—The patient was a native of Windsor. His father and mother died when he was young, and he knew nothing of the causes of their deaths. Of four brothers one only is living. Of the other three, one died of a chest affection, one of fever, and a third of abscesses. He had never been strong, and had not been able to follow a definite employment. At the age of fourteen, when walking with bare feet, a rusty nail penetrated the left great toe. An abscess resulted and discharged. The parts did not heal, and at the end of four months the toe was amputated at the metacarpo-phalangeal joint. From this time the patient was never free from suppurative trouble. A few weeks after the operation an abscess formed in the palm of the left hand. Similar abscesses appeared at various parts of the body without intermission from this time. Before one healed another would appear, so that there were usually two present at one time. On admission there were two such abscesses, one on the dorsum of the right hand and one on the neck. They had all the characters ascribed to superficial tubercular abscesses. Before his death the abscess on the hand healed, but another appeared in the groin. Two years ago the patient began to be weak in the legs and to experience increasing difficulty in walking. There were no disturbances of sensation and no bladder or rectum troubles. He became an in-patient of St. Mary's Hospital, where he remained thirteen weeks. Blisters were applied over the dorsal spine, and he was sent out with a Sayre's jacket and a jury-mast. He left the hospital quite well. He wore the jacket for four months, and when he left it off he was able to work. The weakness of the legs had quite disappeared. He remained well in this respect until April, 1886, when the legs again commenced to feel weak. The weakness increased, and by July the patient had entirely lost all power in both lower limbs. At the same time he began to experience difficulty in retaining his fæces and urine.

When admitted into the London Hospital he was very thin, weak, and anæmic. There was complete loss of power in the lower limbs, but no loss of sensation. There was considerable loss of power in the right arm, but no anæsthesia. The patient had lost control over the sphincters. Large bedsores had formed over the sacrum. The right knee-joint was disorganised and filled with pus, and was flexed nearly at a right angle. A swelling had appeared in the left testicle six months previously, and another in the right testicle some three months before admission. Pain was complained of over the upper dorsal spinous processes. The column in this situation was rigid, and presented a trifling projection backwards.

The case admitted of none but general treatment. The patient became weaker and more emaciated. His temperature varied from 99° to 103°. He was the subject of severe night sweats, but had no rigors. He suffered occasionally from diarrhœa. On Nov. 26th he developed a slight cough, which persisted until his death. He died of increasing debility on Dec. 5th.

Remarks by Mr. TREVES.—Without entering upon the vexed question of the pathology of tuberculosis, the case presents certain notable clinical features. In a patient disposed to tubercular disease a simple injury may induce and localise the first manifestations of the trouble. From this primary centre the specific affection may slowly spread to other parts of the body, assuming the mode of progress of a very chronic type of pyæmia. It is allowed that in subjects predisposed to tuberculosis a simple lesion like catarrhal pneumonia may be the initial local factor in pulmonary phthisis. Rabbits appear to be naturally predisposed to tubercular processes, and in these animals the long retention of a simple seton may induce tubercular changes that in time become general and fatal. Moreover, if rabbits be made to breathe an atmosphere charged with atoms of the sputum from a tubercular patient (diffused by spray), and if their joints be contused, those articulations may become the seat of tubercular disease even when the lungs remain unaffected. In the present patient the mischief appears to have been induced by an injury to a toe, and I have no doubt that the subsequent changes in that part that led to amputation were of a tubercular nature. From this primary focus the trouble spread from one part to another. Certain of the superficial lesions underwent spontaneous cure. It is clear that the infection of the lungs, kidneys, and peritoneum were the latest phases of the disease. It is interesting to note that the vertebral affection remained quiescent for nearly two years. The knee became diseased after the onset of the paraplegia; it was never injured, and had long been retained in a position of complete rest. The occurrence of joint affections in limbs, the seat of nerve disturbances, is always a matter of interest. It may be surmised that the paraplegia served to localise the trouble in the knee, and that the relation between the affection in the cord and that in the joint was of a character allied to that assumed by many to exist in the case of Charcot's joint disease. It may be observed also that the weakness in the lower limbs had commenced on the right side, and was more marked in that extremity until the paraplegia became complete. One point remains: The diseased knee was flexed almost at a right angle. The knee disease had not commenced until the paraplegia was complete, and therefore the flexion must have been independent of muscular action. Its occurrence in a paralysed extremity serves to illustrate Braune's experiments of injecting fluid into the knees of post-mortem subjects. These experiments show that the flexed joint can accommodate more fluid than the extended one, and that distension of the cavity leads to flexion of the limb. The flexion in the present instance may be taken to represent that produced by distension alone, for the articulation was filled with pus.

DEACONESSES' INSTITUTION AND HOSPITAL, TOTTENHAM.

CEREBRAL EMBOLISM FOLLOWING PARTURITION, TERMINATING IN HÆMORRHAGE INTO LATERAL VENTRICLE; NECROPSY.

(Under the care of Dr. RUSCH.)

FOR the notes of the following case we are indebted to Mr. Lloyd G. Smith:—

C. C.——, aged thirty-three years, married, was admitted on Oct. 26th, 1886. She complains of weakness of the upper and lower extremities on the right side and giddiness, and is aphasic (of the amnesic type). The illness began two weeks and a half ago. Her father died of a "head affection"; several members of her family are "subject to fits." She is in comfortable circumstances, and of satisfactory habits. Four years ago she was burnt and frightened by the explosion of a fog-signal in the fire, which had got in among the coals; this laid her up for two months. Has had no previous illness. Her present illness began three weeks after her last confinement (ninth), which took place five weeks before admission. The puerperium was quite normal, and lasted two weeks. After being up a few days, she fell while walking along the passage of the house (no known cause—supposed giddiness); was able to get up herself, and suffered no apparent ill effect, but in four days afterwards she had "a fit," the hands being clenched and the mouth drawn to the right side. A streak of blood was seen on the lip. On recovery from the fit her right side was said to have been para-

lysed; the face on that side had improved since, while the aphasia remained stationary. Has had nine children; no miscarriages. Two children died, one of measles and one of bronchitis. Labours and puerperia always normal. No specific history.

On admission she had a heavy and vacant expression, but no paralysis of face. She was pale, and well developed, tending to obesity; tongue protruded straight out, but with difficulty; bowels constipated; no abnormal physical signs in alimentary, respiratory, or circulatory systems. Temperature 100°; became normal afterwards. Pupils equal; somewhat dilated; no strabismus. Organic reflexes normal. Patellar reflexes exaggerated on both sides. Slight ankle-clonus. Plantar reflex absent on right side; marked on left. The grasp of the two hands appears to be equally strong. Extremities of right side redder and of higher temperature than those of left. She attempts conversation, but is quite unable to express herself; uses words of few syllables only; time and quantity appear especially difficult to express, her attempts ending with "How stupid I am." Is unable to write her name, but begins first two letters correctly, and then says she "can't see." The case was diagnosed to be one of embolism in the middle cerebral artery or one of its branches, and the treatment was mainly expectant.

The patient's condition remained as above until Nov. 4th, when in the evening she became restless, imagined her child was dead at home, and was depressed and emotional; had a good night. On the morning of the 5th, while taking breakfast, she became suddenly unconscious. The right side was limp and motionless, while the left hand was raised up to her face as if to wipe away something. Right eyeball insensitive. Left ocular reflex normal. Pupils equal at first; later on, right dilated and left contracted. Two hours afterwards the patient became unconscious, the face dark and livid, and respiration ceased, the heart's pulsation continuing a few minutes longer.

Necropsy, seven hours after death.—Vessels of scalp and meninges very congested. Large clot distending the left lateral ventricle; an area the size of a walnut in the left third frontal convolution near the posterior part and in surrounding part of brain, softened into a red diffluent mass, with vessels passing through it. In the middle cerebral artery, at its origin, a large embolus was easily detected. There was effusion of lymph at the base of the brain. With the exception of a small blood cyst on the surface of the liver, all the organs (including the uterus) appeared healthy. No signs of atheroma were found.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

REMOVAL OF THE UPPER EXTREMITY, AND LATER OF THE SCAPULA AND PART OF THE CLAVICLE, FOR SARCOMA.

(Under the care of Mr. PAUL SWAIN.)

For the following notes we are indebted to Dr. Buchan, house-surgeon.

Louis G——, aged eighteen years, picture-frame maker, was admitted on Feb. 7th, 1886, for tumour of left shoulder. The patient was a pale, delicate lad, much emaciated, with an anxious expression. The family history and previous personal history were good. He complained that six months before admission he used to be frequently pinched in the left deltoid by a fellow-workman. About two months afterwards he first noticed pain and swelling over the deltoid. This swelling had increased rapidly during the following two months, with great increase of pain. On examination (Fig. 1) there was a large firm swelling involving the whole upper part of the left humerus, and extending somewhat over the scapula and clavicle. The humerus moved with the scapula, almost entirely. There were enlarged veins over the tumour, but no glands were involved.

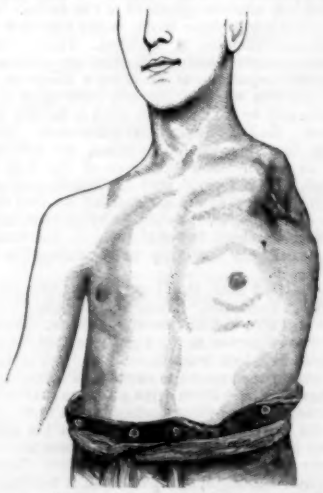
On Feb. 11th, under methylene, a V-shaped incision was made over the scapula, as if for excision of that bone. However, on cutting down to the joint, the humerus only was found to be involved, and it was removed at the joint. All arteries were tied with chromic catgut, the wound dressed with iodoform and carbolic oil on lint, and a drainage-tube inserted. Morphia and stimulants were freely used from the time of the operation. On the evening of the 12th the temperature was 101·2° F., the highest point. For the first fortnight the wound was dressed under the carbolic spray, by which time it was practically healed.

The patient was discharged cured on March 13th, and had no return of the disease. The tumour was a myeloid sarcoma, arising from the periosteum and causing erosion of the bone.

On April 22nd the patient was readmitted with a recurrence of growth in the left scapula. On April 24th, under methylene, a V-shaped flap was made over the scapula and the whole bone removed, together with the acromial end of the clavicle. Wound dressed as before. A slight skin slough formed at the lowest end of the flap, but with this exception the wound healed rapidly. The patient was discharged on May 27th.

FIG. 1.

FIG. 2.



After recovery from second operation.

Remarks by Mr. PAUL SWAIN.—I regret to say that some weeks after his discharge from hospital the patient caught a severe chill while boating. Pneumonia of the right lung set in, and he gradually sank. (The woodcuts are from photographs kindly taken by Fleet-Surgeon Longfield H.M.S. *Royal Adelaide*).

EDINBURGH ROYAL INFIRMARY.

CASE OF TRAUMATIC TETANUS CURED BY REMOVAL OF THE CICATRIX AND SURROUNDING PARTS.

(Under the care of Mr. J. MONTAGU COTTERILL.)

GEORGE McC——, aged thirty-nine, was admitted on Aug. 2nd with a history of having stabbed the ball of his right thumb with a piece of broken glass on July 17th. Tetanus began to manifest itself on the twelfth day after the infliction of the wound, the first symptom being difficulty in mastication accompanied by pains in the back. As the disease progressed rapidly he consulted his medical attendant, who treated him with Calabar bean (half a grain of the extract every three hours). In spite of this treatment being carried on for four days, the symptoms became more distressing. He consequently applied to the infirmary for advice.

The man's condition on admission was as follows. Trismus was well marked; deglutition was difficult; the muscles of the face, neck, and back were in a state of rigidity; his walk was tottering, and he had to support himself with his hands to avoid falling. He complained of considerable pain in the face, neck, chest, and back. The tongue was moist, white, and furred; the bowels costive. The temperature was slightly subnormal. There was a V-shaped scar, some three inches in length, bluish in colour, knotty, and painless on pressure, situated over the ball of the right thumb.

During the first few days of his stay in hospital he was treated by full doses of chloral and bromide of potassium. This treatment certainly subdued for a time the intensity of the symptoms, though he had frequent spasmodic contractions of the muscles of the back and legs. These spasms could be induced at once by pressure over the ulnar nerve at the bend of the elbow on the affected side, though pressure over other nerves or over the cicatrix itself had no such effect. The application of ice-bags to the spine was tried, but appeared to have a rather prejudicial effect than otherwise. The hypodermic injection of one-fifteenth of a grain of eserine was next tried; this caused alarming cardiac depression, which necessitated very free stimulation for some hours. The eserine seemed to have no effect on the tetanus, and as increased difficulty in deglutition, more frequent and more severe attacks of opisthotonos, and retention of urine occurred, on Aug. 20th Mr. Cotterill freely excised the cicatrix, taking away a considerable slice of the muscles and skin in its immediate neighbourhood. The result was most satisfactory; the patient at once began to mend in all respects, and with the exception of one slight attack of opisthotonos, brought on by the indiscretion of a visitor, he made a rapid and uninterrupted recovery.

Remarks by Mr. COTTERILL.—The interest of the case centres in the fact that though the operation was delayed for twenty-two days after the tetanus set in, and though the central nervous system was seriously implicated, the mere removal of the cicatrix effected a rapid cure. Speaking of this line of treatment, Fayrer[1] says: "I believe that though this treatment would frequently be of service if practised early, it would become useless if resorted to after the disease has become thoroughly developed for even two or three days." Spence[2] also writes: "If the operation be performed at the very first before the symptoms have made any very great progress, the result may be favourable; but after the disease has progressed—when the trismus and spasms have become marked, or when the disease has passed beyond stiffness in the neck and difficulty in swallowing,—then amputation will do no good, as by that time the disease has been propagated to the nervous centres." On the other hand, M. Nicaise of Paris says: "Neurotomy is especially indicated when the spasms begin near the seat of injury before their generalisation; but it may still contribute much to recovery when generalisation has occurred by removing the cause which keeps up the spinal irritation."[3] Brown-Séquard writes: "Those who maintain that tetanus, when it has fairly begun, and attacked not only the head but the trunk and limbs, cannot be cured by these operations (amputation and neurotomy), have not read the details of the cases which have been published.....It is most important to give the chance to the patient." Amongst others, Mr. Annandale has reported a case[4] in which a case of acute tetanus affecting the whole system was cured by the free removal of the cicatrix. In the case now reported, though not of the most acute form, the tetanus was decidedly severe, and, in spite of energetic medical treatment, was becoming rapidly worse. Its cure under these circumstances encourages one to operate more hopefully even in what are usually considered unfavourable conditions.

[1] Clinical Surgery in India. [2] Lectures on Surgery.
[3] Injuries and Diseases of Nerves, in Ashhurst's Encyclopædia of Surgery. [4] Edinburgh Medical Journal, 1873.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Ulceration and Endocarditis of Right Side of Heart.—Syphiloma of Heart.—Rare Aneurysm of Undefended Space with Cerebral Tumour of Brain (? Syphilitic).—Alcoholic Paralysis.—Ulcers of Stomach in Infantile Tuberculosis.—Epithelioma of Bladder.—Tumours of Testes and Cord.

AN ordinary meeting of this Society was held on the 21st ult., Dr. J. S. Bristowe, F.R.S., President, in the chair. The next meeting will be the annual one, and the new President is to be Sir James Paget, Bart.

Dr. HALE WHITE exhibited a specimen of Right-sided Malignant Endocarditis. It came from a man, aged thirty-nine, who had been ill for four months with rigors. On admission he was found to have a basic systolic bruit, audible chiefly over the pulmonary area and conducted upwards to the left. The rigors continued; the temperature, which was not easily controlled, sometimes reached 105°. The diagnosis of malignant endocarditis of the pulmonary valve was made. At the necropsy the right ventricle was found dilated and hypertrophied. The two anterior pulmonary valves were ulcerated and perforated; a large mass of vegetations sprang from the right one. The liver was fatty; the spleen enlarged; but nothing else abnormal was noted.

Dr. W. PASTEUR showed a specimen of Syphiloma of Heart from a woman aged thirty, who was taken to Middlesex Hospital *in articulo mortis*. She was probably a prostitute. None of the ordinary signs of syphilis were visible except in the heart. The liver had a peculiar marbled appearance. There was some recent lymph on the surface of the left ventricle, which was hypertrophied and dilated. Greyish opaque patches of varying size and distribution were seen in the wall of the ventricle and septum. At least one half of the ventricle was diseased. The right ventricle was less diseased. The patches were ill-defined and translucent at the edges. There were milky-looking patches on the endocardium. Microscopical sections showed infiltration of corpuscular growth, which was very vascular at the margin; the nuclei were spherical and distended. In some of the vessels of the heart doubtful evidences of periarteritis were to be seen, and possibly also of endocarditis. The liver showed numerous accumulations of small round cells, like that met with in some forms of interstitial hepatitis of congenital syphilis.—Dr. CARRINGTON demurred to the syphilitic view of the disease. Why could it not have been an early case of fibroid disease of the heart? The microscopical appearance in the liver was not evidence of syphilis.—Dr. A. MONEY said the specimens were just like those seen in inherited syphilis of liver and heart, and thought that this was in favour of the view that they were syphilitic.—Dr. BARLOW agreed with the last speaker. He spoke of the macroscopical appearance being like that caused by the action of strong carbolic acid on the heart substance and endocardium. With regard to fibroid heart, he asked what was so likely to produce it as syphilis? There was no evidence of old pericarditis, which was a common cause of fibroid lesion of the myocardium. Alcoholism should also be considered in this connexion.—Dr. DAWSON WILLIAMS mentioned a case which nearly resembled that described by Dr. Pasteur. The patient was a boy aged thirteen, who suffered from emphysema and died of bronchitis. At the necropsy it was found that the heart was large and heavy; the pericardial cavity was obliterated over a large extent of surface. In the substance of the heart were numerous nodules. The nodules varied in size from that of miliary tubercle to nodules fully an inch long and half an inch thick. The patient was an only child and had a syphilitic aspect, and the mother had had miscarriages; but there was no direct evidence of syphilis. The changes were sup-

posed at the time to be syphilitic, although the appearance on section somewhat suggested sarcoma.—Dr. SIDNEY COUPLAND adopted the syphilitic view because there was no other alternative. He thought the resemblance of the changes to those of inherited syphilis would not be sufficient to remove them out from category of acquired syphilis. It was an infiltrating form, rather than the better known circumscribed lesions of syphilis. Alcoholism as a cause of heart lesions was still involved in obscurity.—Dr. GOODHART argued from the liver to the heart. He had seen such appearances in adults from syphilis of the acute form.

Dr. ANGEL MONEY showed a rare specimen of Aneurysm of the Heart and large Tumour of the Brain, taken from an idiotic female child aged five years. The aneurysm occupied the "undefended space"; its walls were formed by the opened-up laminæ of the septal cusp of the tricuspid valve. All the valves of the heart were in a sacculated or "pouchy" condition, and irregularly thickened. The tumour in the right cerebral hemisphere was of the size of a small orange, and probably gummatous; no bacilli had been found. There were a few fibroid nodules in the right lung, and both lungs were very small and flat. The child was microsomatic, weighed only 13 lb., and measured 31 in. The head measured 18 in. in circumference and 12 in. over the vault from ear to ear. The forehead was almost covered with hair. The child had never walked or talked, and could not even sit up. The anterior fontanelle was still open, and measured one inch and three quarters by one inch and a quarter. There was a loud systolic murmur heard over the præcordia.—Dr. BARLOW thought that the tumour was much tougher than a scrofulous mass, and had a firm chestnut section. The probable very early origin of it was also in favour of syphilis; the evidence of fœtal tubercle was inconclusive. He had seen a specimen of undoubted fœtal syphiloma of the brain. The aneurysm was a unique specimen, and had been shown as such by Dr. Wickham Legg in his Bradshawe Lecture. The question of the origin of aneurysm of the heart in syphilitic changes was a most interesting one, that would repay study. A subacute endocarditis might result from syphilis. He had seen only a second case of aneurysm of the heart in a child in the anterior wall of the right ventricle about the size of a shilling; it was accompanied by mitral stenosis; the syphilitic origin of it was doubtful.—Dr. S. COUPLAND asked whether the aneurysm could have had an origin in an error of development, but deferred to the syphilitic view.—The PRESIDENT asked whether there was evidence of syphilitic disease in the heart.—Dr. MONEY, in reply, said the syphilitic history was inconclusive. He adopted Dr. Barlow's view that the heart changes might have been of syphilitic origin, and possibly that this may have arisen during intra-uterine life. The myocardium showed no sign of congenital syphilis to the naked eye, but it had not been examined microscopically. The presence of bone-thickening in the skull favoured the syphilitic view.

Dr. HADDEN described three fatal cases of Alcoholic Paralysis. The first patient was a woman, aged twenty-seven, who had been drinking to excess for at least four years. For a year before admission her arms and legs had been growing weak. The lower limbs were paralysed and wasted, especially the extensor muscles. The limbs were bent at the knees, and much pain was felt on trying to straighten them. Sensation was unimpaired. The knee-jerks were absent. The muscles were tender, and gave no response to strong faradaic or galvanic currents. There were evident signs of phthisis. On microscopical examination of the spinal cord, it was found to be quite healthy. The myelin of the peripheral nerves had broken up into a finely granular material, and the axis cylinders were quite obscured. The nuclei of the fibres were enlarged. The nerve tubes were irregular in shape, enlarged in some parts, reduced in others, in consequence of the removal of the granular material. The muscles showed an increase in the sarcolemma nuclei and nuclei of the interstitial tissue. In some places there were groups of small round cells, which gave rise to local atrophy of the fibres; slight granular change was seen in some of the fibres, but as a rule the structure was good. In another patient, aged forty-four, who had suffered from alcoholic paralysis for about a month, the spinal cord was found healthy, but the nerves exhibited mixed parenchymatous and interstitial degeneration. The muscles were affected as in the first case. The third case was that of a gentleman, aged fifty-six, who had relapsed after a severe attack of alcoholic paralysis. He was admitted into St. Thomas's Hospital for a deep ulcer on the dorsum of the left foot, opening into the small joints of the toe. He had well-marked paralysis of the legs, with impaired sensation. In this case also the spinal cord was healthy, and the nerves and muscles diseased. There was well-marked phthisis in all three cases. The results of five fatal cases were summed up. The spinal cord was healthy in all. In four of the five the nerves were examined and found degenerated, but in two the change was rather that of a perineuritis. The muscles simply showed increase of nuclei, and occasionally appeared granular. In two cases the medulla was examined and found healthy, and in two the motor convolutions were healthy. The association of phthisis was observed in four cases, and in one the lung mischief was early.—Dr. G. N. PITT, Dr. FINLAY, and Dr. A. MONEY corroborated the statements of Dr. Hadden in regard to the nature of the microscopic changes in alcoholic paralysis.—Dr. BRISTOWE asked whether the changes obtained were more in the distal or proximal parts of the nerves.—Dr. S. COUPLAND referred to the occurrence of peripheral neuritis in association with tubercular disease. Were the changes inflammatory or degenerative? He thought rather the latter.—Mr. A. A. BOWLBY thought the term "neuritis" misleading, for the changes were like those found in Wallerian degeneration.—Mr. H. T. BUTLIN said that sometimes the change might be chiefly in the connective tissue of the nerve. In a specimen of Mr. Savory's there was but little change in the parenchymatous part of the nerve; the case was one of perforating ulcers. The sensory fibres of the nerve were smaller and more affected in some cases than the larger motor fibres.—Dr. HADDEN said that the changes probably began in the smaller nerve fibres, and were less evident in the larger nerves, whilst the anterior roots of the cord were usually free. He rather thought there were sensory changes in some cases of alcoholic paralysis. A considerable thickening of the endoneurium obtained in the sciatic nerve in a case of locomotor ataxy that he had examined. He opined that Mr. Butlin's view might be correct, that in some the changes were more interstitial than parenchymatous. He carefully avoided the discussion of the inflammatory or degenerative nature of the nerve changes.

Dr. BARLOW showed a specimen of Tubercular Ulcer in the Stomach of a child, twenty-one months old, affected with general tuberculosis. It was situate near the cardiac end in the great curvature; had undermined edges, but no thickening around. There were also follicular ulcers at the mid-point of the great curvature, and two near the pylorus. In the first ulcer there was a minute elevation under the mucous membrane, which might have been a miliary tubercle, but had not yet been searched for bacilli. The interest of the case lay in the relation of the small tubercle to the ulcer. Small ulcers of the stomach had been found in adult phthisis. Louis said he had never once seen anything like tubercle in these, and Andral had only once found tubercle of the stomach. Of 146 cases of tuberculosis in children, Barthez and Rilliet found 21 with the stomach affected, and in 7 of these there were miliary tubercles. They had no doubt that the ulcers were caused by tubercle. He had seen two other cases of this kind, but not with miliary tubercle in their base.

Mr. BRUCE CLARKE showed a specimen of Epithelioma of the Bladder. There were two separate tumours. The question was discussed whether the one tumour might have been the cause of the other.—Mr. H. T. BUTLIN mentioned a similar case.—Mr. A. BOWLBY referred to two other specimens in St. Bartholomew's Hospital of multiple growths in the bladder.—Dr. HADDEN had seen an epitheliomatous ulcer of the œsophagus associated with a few other growths in the lower part of the gullet.

Mr. SWINFORD EDWARDS showed specimens of Tubercular and Malignant Disease of the Testis and Spermatic Cord. The first specimen was taken from a man aged fifty; the microscopical appearances were doubtfully those of round-celled sarcoma, and the growth was seen extending chiefly along the vessels. The second specimen was from a man aged forty-five; it began as a painful nodule; the section was obscurely fibrous; it was probably of a tuberculous nature. There were no signs of tubercle elsewhere. The third specimen came from a man aged thirty; it was a round-celled sarcoma of the testis.—Mr. A. BOWLBY referred to the fat and fibrous tissue appearance as of an inflammatory growth in the first specimen, which he thought was not sarcomatous.

The following card specimens were shown:—Mr. S. Paget: Recurrent Epithelioma of the Foot. Mr. Shattock: Hammer

Toes. Mr. Targett: Congenital Deformity of Hip. Dr. Beavan Rake: Spontaneous Cure of Thoracic Aneurysm in a case of Anæsthetic Leprosy. Dr. G. N. Pitt: Round-celled Sarcoma of Thyroid growing round Œsophagus and into Left Vagus and Internal Jugular Vein.

HARVEIAN SOCIETY.

Peripheral Neuritis.—Paraplegia in Pott's Disease.—Pityriasis Versicolor.—Dyspnœa from Pressure of Enlarged Bronchial Glands.—Chylous Ascites.

A MEETING of this Society was held on Thursday, Nov. 4th, 1886, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Dr. BUZZARD exhibited a patient who had been affected with Paraplegia of neuritic and not of spinal origin. He was a carpenter, and had been exposed to wet and cold in September, 1885. This was followed by pain and weakness, in the right side at first and then in the left, with some tenderness on pressure. In three months' time he had lost power to such an extent that he could not walk; he complained of numbness and tingling, and the soles of the feet were tender. Sometimes also he had tingling in the hands. When seen in March, 1886, he was able to get about on crutches, but did not raise the toes in walking. The knee-jerk was absent. The muscles in the front of the legs did not respond to a very strong induced current, its application not being even felt. The peronei acted slightly, the calf muscles still better, those of the thigh reacting normally. Slight reaction returned in the anterior tibial muscles, a stronger current being required when the negative pole was placed on the muscle. Steady improvement took place. There was slight plantar reflex, but all the superficial reflexes were normal, and the vesical functions were not in any way affected. All portions of the cord, therefore, were probably intact. A large quantity of urine was passed, which contained sugar. Treatment had consisted mainly in the application of the constant current. The patient could now walk a mile, and was still improving. Dr. Buzzard pointed out that the local pain and tenderness, the loss of electrical reaction and of pain in the affected muscles, all combined to indicate peripheral neuritis, while the presence of the superficial reflexes was inconsistent with a lesion of the cord sufficiently grave to produce the other symptoms.

Dr. D. B. LEES exhibited a case for Diagnosis between Peripheral Neuritis and Tabes Dorsalis.—The PRESIDENT thought that in all future cases the possibility of peripheral neuritis should be borne in mind. He thought the new name of neuritic paraplegia was quite justified as descriptive of a fairly common class of cases.

Dr. HUGHLINGS JACKSON showed a boy, aged twelve, recovering from a second attack of Paraplegia associated with Pott's Disease of the Spine. The prognosis in such cases was good when rest was enforced. He also exhibited a boy, aged eleven, who had become paraplegic in Sept. 1884, in consequence, it was supposed, of a transverse myelitis. There was no discoverable disease of the vertebræ. He was admitted into the London Hospital, in Jan. 1885, without a trace of movement in the legs, and with extreme rigidity. Not until Oct. 1885 was the slightest movement observed, and then only in the toes. From that time improvement had been steady, but the boy could only now just walk. Dr. Hughlings Jackson remarked on the great length of time during which a patient might remain paraplegic and yet recover, sometimes as long as twelve months. He trusted to rest in bed, not thinking that any drugs or local applications to the spine had any beneficial effect upon the spinal cord disease. He hoped at a subsequent meeting to show both the patients walking well.

Dr. SIDNEY PHILLIPS showed a case of Pityriasis Versicolor in a child. The boy, aged seven years and nine months, exhibited symmetrical patches of a fawn colour on the chest and back. Scrapings from these examined microscopically were found to consist of mycelium and spores. There was no ringworm of the scalp or any history of its existence.—Dr. THIN threw some doubt upon the diagnosis, and pointed out that the disease was equally uncommon in very old as well as in very young people.

Dr. W. EWART exhibited a case of Dyspnœa with Metallic Cough and Stridulous Inspiration. The patient, a woman aged thirty-six, had suffered from cough for ten months, at first uncomplicated with dyspnœa. As the cough became more paroxysmal, the difficulty in regaining breath was proportionately increased. Inspiratory dyspnœa also followed upon any severe exertion. The physical signs were dulness in the upper sternal and parasternal regions (especially on the right side), and dulness in the right interscapular region. In all these places there was tracheal breathing, and also in the left upper interscapular region. The patient had had syphilis, and might therefore be the subject of cicatricial bronchial stenosis. This alone, however, would not explain the presence of dulness, which was more probably due to enlargement of bronchial glands, from syphilitic or other cause, which were exerting pressure upon the bronchi, with the above results.

Dr. ROBERT MAGUIRE showed a case of Chylous Ascites, in a man aged forty-two, who had suffered from œdema of the feet twelve months before admission into hospital, but this had subsided with rest in bed. Nine months later he was seized with sudden pain in the epigastrium, which, though less intense, lasted for five weeks. Two months later the abdomen began to enlarge. There was history of alcoholism, but not of syphilis, and the patient had never lived out of England. On admission there was general distension of the abdomen with fluid, enlargement of superficial veins and of spleen, but not of the liver. Two hundred and twenty ounces of milky fluid were removed by tapping. The fluid was slightly albuminous, contained a large amount of fat and peptones, and did not coagulate on standing. Fat globules, granular matter, and leucocytes appeared under the microscope. In three weeks' time 218 oz. of similar fluid were removed; the fluid did not return, and there was then discovered prominence in the epigastrium, with some increase in the liver dulness. Œdema of the legs still remained. Dr. Maguire diagnosed cirrhosis of the liver, with some inflammatory material behind it, pressing upon the vena cava and the receptaculum chyli, causing rupture of the latter. It seemed very anomalous, however, that lymph, which ordinarily flows under such very slight pressure, should in these cases accumulate to such an extent as to burst both the thoracic duct and the peritoneum.—Dr. EWART, commenting upon the case, believed that the collective force exercised by the muscular coats of the villi might be sufficient to cause the rupture, although that exercised in each individual villus was very small.

The following is a list of the officers of the Society for the coming year:—President: Mr. Edmund Owen. Vice-Presidents: Mr. T. Bryant, Drs. Cavafy, Buzzard, and John Williams. Treasurer: Mr. G. P. Field. Hon. Secretaries: Drs. Clifford Beale and Handfield-Jones. Council: Drs. W. Ewart, T. Morton, Champneys, Hughlings Jackson, R. S. Mair, R. H. Milson, J. R. Walker, H. W. Page, J. Ernest Lane, C. W. Mansell-Moullin, F. J. Marshall, and A. J. Pepper.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Friday, Dec. 17th, Dr. Alfred Hill President, in the chair,

Dr. ASHBY read a paper on the Contagious Diseases (Animals) Act, 1886, of which the following is an abstract:—The author began by pointing out that the changes effected by this Act in existing statutes had been rendered necessary by the complete failure of the previous Act to produce any effectual control of dairies and cow-sheds. He gave the provisions of the 9th section of that Act, which embodied the 34th section of the Contagious Diseases (Animals) Act of 1878, and which alone affected sanitary authorities. For the purpose of that section, the Privy Council were replaced by the Local Government Board as the central authority. Local authorities in the metropolis were the same as formerly, and in other parts of England and Wales they were now urban and rural sanitary authorities. He pointed out that the wording of the section only conferred on local authorities and their officers a right of entry to any premises between 9 A.M. and 6 P.M., for the purpose of enforcing Orders and Regulations, and not for any other purpose, such as for examining as to the existence of any infringement of Orders or Regulations. He stated that it would be convenient for the officers of the sanitary authority most concerned with duties under the Act to obtain from the local authorities, under the Act of 1878, of their districts a general authorisation to enter any premises in which there was a diseased animal in an infected place. No officers in particular were mentioned, but

the clerks of sanitary authorities would be concerned with all legal questions or proceedings arising out of the administration of the Act. Upon inspectors of nuisances would probably devolve the chief part of the work. Medical officers of health would have to advise sanitary authorities on questions arising out of the enforcement of Orders and the framing and enforcing of Regulations. They would advise the inspectors when in doubt, and exercise a general supervision over the administration of the Act. In the event of an outbreak of infectious disease, they would have important duties to perform in making inquiries into the causes of epidemics, and advising such measures as might be necessary to check the spread of disease through contaminated milk. It would behove them to exercise much tact in prosecuting such inquiries, for in the absence of it great injury might be done to persons in the trade. A surveyor's advice would be necessary when important structural alterations were contemplated. Should the work prove to be heavy, the officers chiefly concerned might fairly be entitled to extra remuneration, and, if required, additional officers might be appointed. The Dairies, Cowsheds, and Milkshops Order of 1885, and regulations made thereunder, remained in force; those already made might be adopted by the new authorities, but it might be deemed advisable to revoke them and make new ones. Registers kept by the authorities under the Act of 1878, or copies, were to be delivered to the new authorities. The speaker pointed out that there were no definitions of terms used in the 34th section of the Act of 1878, except "cattle," which meant bulls, cows, oxen, heifers, and calves. "Animals" meant cattle, sheep, goats, and all other ruminating animals and swine. Horses, asses, mules, and dogs were included in certain Orders. "Disease" meant cattle plague, pleuro-pneumonia, foot-and-mouth disease, sheep-pox and sheep-scab. Glanders, farcy, swine fever, anthrax, and rabies were also included in certain Orders. The want of exact definitions of other terms would cause doubt as to the interpretation of parts of the Acts and Orders. It was much to be regretted that this defect had not been remedied in the Act of 1886. It did not appear that any effectual provision had been made to compel defaulting authorities to carry out the Act. Local authorities had to deal solely with occupiers, and not with owners. They could adopt any forms of register or notice they pleased. They and their officers still had no concern with contagious diseases amongst animals, except so far as related to milk from diseased cows. Cowkeepers, dairymen, and purveyors of milk only were named in the 34th section of the Act of 1878. The Privy Council had added much confusion by using in their Order of 1885, without definition, the further titles of "occupier of a milk store or milk shop" and "persons selling milk by retail." That Order required every cowkeeper, dairyman, or purveyor of milk to be registered. Every local authority had to keep a register of such persons, and were empowered to make their own regulations on specified matters. Dr. Ashby next commented on the various articles of the order exempting certain persons from registration, requiring certain provisions for regulating the sanitary condition of new and old cowsheds, and precautions to be observed against contamination of milk. The milk from diseased cows, those ill with cattle plague, pleuro-pneumonia, or foot-and-mouth disease only might not be mixed with other milk, or be sold or used for human food, or be sold or used for food of any animal without being boiled. It would seem desirable that the meaning of "disease" should be from time to time extended so as to comprise tuberculosis, scarlet fever, diphtheria, or any other disease which might be observed to dangerously affect the milk of cows. It might be thought that the Local Government Board should have done this by order, but they had not the power; only the Privy Council could make such an Order under the Act of 1878. The Local Government Board had issued the Dairies, Cowsheds, and Milkshops Amending Order of 1886. It provided a penalty for the enforcement of the Order of 1885. It would have been more acceptable if it could have assigned a definite meaning, in default of the Act of 1886 having done so, to all the terms in the 34th section of the Act of 1878, and in the Order of 1885, which had not been elsewhere defined. Dr. Ashby observed that it was incumbent upon sanitary authorities and their officers to exercise these new powers and duties with due regard to the enormous interests involved, and whilst it behoved them to use all vigilance to diminish human preventable diseases in every lawful way, these remarkably trying times did not admit of landlords and farmers, already hampered, being further harassed through being called upon to reconstruct almost every dairy and cowshed, as would be the case if too stringent regulations were made. Medical officers of health would be called upon for advice in the framing of regulations, and it was most desirable that in their laudable efforts to annihilate preventable diseases they should not be led so far as to annihilate the unfortunate cowkeepers and dairymen instead. The general principles to be kept in view in framing regulations were:—They must adhere rigidly to the letter of the law, they might not go outside the matters in respect of which powers had been given for making them; they must not include anything specifically enacted in an Act of Parliament; and they must not be of too restrictive a character or repugnant to the laws of England, but must be reasonable, certain, and determinate. The powers for making regulations specifically defined by the 34th section of the Act of 1878 and the Order of 1885 could not be exceeded or departed from in any way. The regulations were of a penal character, and local authorities must not in framing them invent offences. In drawing up regulations, he would say be strong in things really essential for preventing disease; in other things be less stringent. Although they might consider that matters beyond those actually named in the Acts and Order had a bearing on disease prevention, yet they might not be comprised in regulations, because they would be *ultra vires*. Since it appeared to the author that some of those points had not been sufficiently kept in view in making regulations, and that the powers of local authorities had thus been exceeded, he proposed to consider the matters under the several headings of the 13th Article of the Order of 1885, which authorised regulations "for the inspection of cattle in dairies." Under that a regulation giving a general power of entry could not be made, but only one "for the inspection of cattle." It might not provide for the inspection of buildings or premises or animals, as the latter term would include something more than "cattle." The inspection must be of cattle in "dairies" only. That was a most unfortunate term in the absence of any definition. It was evidently intended to signify a dairy farm, but he thought in most districts it would excite the risible faculties of farmers if they were asked to allow cattle to be inspected in their dairies. The use of the term was due to the wording of the Act of 1878. The speaker submitted a set of regulations he had drawn up, from which he had endeavoured to exclude all the points he believed to be *ultra vires*. It was difficult to conceive that the Legislature ever intended that such vast structural alterations as would be entailed by some regulations should be enforced upon the owners of buildings already erected. Their powers were not very satisfactory or well defined, and would remain so until Parliament could spare time to amend such a Parliamentary curiosity of literature as the ninth section of the Act of 1886, and until the Local Government Board should have defined, by Order, the terms in the Order of 1885, if they had power to do so.

The discussion was adjourned until the next meeting.

Sanitary Registration of Buildings.

AT the adjourned meeting of the Society the President, Dr. Alfred Hill, again occupied the chair. The attendance was not so large as on the former occasion.

DR. C. E. SAUNDERS read the report of the Council, which was as follows:—"Your Council find themselves quite unable to approve the principle of compulsory registration involved in the Sanitary Registration of Buildings Bill, and having given the details of the measure a very full and careful consideration, they regard it as impracticable, and recommend the Society to petition against the Bill, should it be necessary to do so."

The PRESIDENT said that as the Council have expressed an opinion so adverse to the Bill, it would be useless and supererogatory to enter into any further discussion of its clauses and provisions.

MR. MARK H. JUDGE then made a few remarks in favour of the Bill, and afterwards,

MR. SHIRLEY F. MURPHY, hon. sec., read a letter from Mr. Ernest Turner, F.R.I.B.A., who regretted his inability to be present. Mr. Turner wrote as follows: "The scheme presented in the draft Bill promoted by the Sanitary Assurance Association is, in my humble opinion, not only totally impracticable, but is also calculated to do much harm to the cause of sanitary progress. The principles of

house sanitation are only just beginning to be understood by a few, and the practice is understood by fewer still—although amongst those who have made a special study of the subject any difference of opinion is confined to detail—amongst those engaged in building operations, and amongst sanitary officials there appears to be at present too wide a divergence of opinion even upon general principles to admit of any hope that such a compulsory measure would be satisfactorily carried into effect. As an instance, I may mention the views of the surveyor of a large London parish, who, a short time since, expressed the opinion, at one of the meetings of the Society of Medical Officers of Health, that the public sewers should be ventilated through the drains and soil-pipes of private houses, and that disconnecting chambers were objectionable. Again, I know architects in extensive practice who are still of opinion that the pan-closet is a desirable appliance, and this view obtains amongst some of the officials in Government departments. When we know that even sanitary officials and men of high standing in their profession hold such opposite views, we may fairly conclude that if sanitary reform were handed over to the persons proposed by the Bill, insanitary muddle would be the result. ..... I hope the Society will take the view that the right field of labour is first of all with the sanitary education of the officials who have to administer the laws, and of those to whom the erection of buildings is entrusted, and then the amendment of existing Acts or passing of new Acts of Parliament. The Metropolitan Building Act is ably administered by a body of trained officers, who are not elected to office until they have given proof of their competency to discharge the duties. Surely any comprehensive Sanitary Act such as is proposed would be premature until sanitary education has advanced sufficiently far to provide a similar safeguard to the public."

The motion for the adoption of the report of the Council was then carried, with one dissentient; and on the motion of Professor CORFIELD, it was unanimously resolved that copies of the report be sent to Dr. R. Farquharson, M.P., Sir Henry E. Roscoe, M.P., F.R.S., Sir W. Guyer Hunter, M.P., M.D., and P. Charles Cameron, M.P., by whom the Bill is to be brought into the House of Commons.

ACADEMY OF MEDICINE IN IRELAND.

Narcolepsy.—Myxœdema.

At the opening meeting of the Medical Section on Nov. 19th, the PRESIDENT delivered a short address on some of the circumstances which have prevented a precise knowledge of the Action of Medicine.

Dr. A. W. FOOT read a paper on Narcolepsy (so called by M. Gélineau in 1880) and narrated the case of a youth, aged eighteen, who had been under his observation for three or four years, during which time he was subject to sudden attacks of morbid somnolence, which came on whether he was sitting, standing, walking, eating, driving, railing, or playing the piano. He had no tonic or clonic spasm, retained common sensation, and did not lose consciousness. His personal history was good, but he came of a neurotic family. No treatment availed to relieve him. Dr. Foot referred to two other cases which had been observed in Ireland by Prof. Macnamara and the late Dr. Graves; and concluded by suggesting that the word "hypnolepsy" would be more correct than narcolepsy; that this condition was quite different from the sleeping sickness of Western Africa, and by pointing out the distinction between it and epilepsy.—Dr. HENRY KENNEDY said that in Simpson's Hospital he had frequently observed persons, more or less advanced in life, showing a tendency to fall asleep under unusual conditions—for instance, at dinner. He considered this tendency to be due to the blood being overloaded with the purest kind of fat, as described by the late R. Smith.—Mr. CORLEY mentioned a case which he had had under treatment that agreed in every respect with the description of the disease given by Dr. Foot. Three or four years ago a dairyman's labourer was admitted into the Richmond Hospital. He had some months before fallen from a dairy cart on the back of his head. While eating he suddenly let his knife and fork fall and went to sleep. He had evidently cerebral pressure. His family history suggested that he had something in the nature of a tumour, probably out of reach of the surgeon's knife. The case had a fatal result. Dr. Abraham made a post-mortem examination, which confirmed this diagnosis. There was a small abscess, twice the size of a walnut, in the posterior right lobe of the cerebrum; and no doubt the symptoms depended upon that. The striking similarity in the symptoms described by Dr. Foot indicated that some part of the cerebrum was affected in his case also.—Dr. C. J. NIXON had recently seen a member of his own profession who was suffering from attacks like angina pectoris. Close on sixty years of age, the gentleman in question had been for several years, whilst in the Army Medical Service, subject to sudden attacks of periodic sleep at extraordinary times, even on duty. The intervals between the attacks greatly decreased, and he was obliged to leave the service.—The PRESIDENT said he had seen only one such case—that of a powerful young man, aged twenty-seven or twenty-eight, who managed successfully a great business in the city. He was of a family in whom neurotic affections abounded consequent on close intermarriage, his father and mother being first cousins.—Dr. FOOT, in reply, said he was aware of Smith's observations on fat and free oil, which that writer had used not in connexion with extreme tendency to sleep, but with fatty degeneration of the viscera, and thus he had described free oil flowing out of the body. Sleepiness at meals had nothing to do with narcolepsy. A good dinner, a warm fire, and a comfortable chair invited sleep. Following Gélineau and Dana, he had used the word "neurosis." One of Gélineau's patients, who was a soldier, had started a nice medico-legal question, "What would become of me," he asked, "if the sleep attack came on me whilst I was on sentry or on guard? I should be shot, and not for any fault of mine."

Dr. C. J. NIXON read a paper on a case of Myxœdema, having previously exhibited the patient.—Dr. M'SWINEY said the paper proved, as also did a recent case operated on by Sir William Stokes, that the crucial experiments performed by the surgeon often disproved theoretical conclusions which were the result of mere observation.—Sir WM. STOKES said his case was that of a female with a rapidly increasing bronchocele. Owing to the mechanical effects of pressure of the tumour, he deemed it necessary to relieve her. The operation consisted of two parts. He first removed the left lobe of the thyroid gland as the largest of the two. The wound healed, and the patient perfectly recovered. After a considerable interval she presented herself again for admission into hospital. The tumour on the right side having undergone remarkable diminution, increased rapidly, and gave rise again to the serious symptoms referable to mechanical pressure. Thereupon he removed the remaining lobe of the thyroid. The wound completely united, and the patient seemed to go on favourably till the remarkable symptoms detailed in Dr. Nixon's case supervened—pallid face, puffy eyes, and swelling about the wrist and ankles, which pitted on pressure, while the intellect became impaired, as indicated by the length of time it took her to answer a question. At length, as the symptoms became urgent, she had convulsive seizures, somewhat epileptiform, respiration became difficult, and she expectorated large quantities of mucus—these conditions increasing till she died from exhaustion. He had little doubt there was a distinct connexion between the complete removal of the thyroid gland and the symptoms which subsequently developed. Still, he would not take a gloomy view of the future of thyroidectomy. There had been a large number of cases of removal of the thyroid gland unattended by the development of myxœdema.

MANCHESTER PATHOLOGICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Dec. 8th, 1886, Dr. J. Dreschfeld, President, in the chair.

Broncho-pneumonia in Children.—Dr. H. ASHBY showed the lungs of a child who died from broncho-pneumonia.

Epithelioma of the Tongue.—Dr. W. THORBURN showed a number of sections of an epithelioma of the tongue, which had apparently developed from an ulcerating gumma. The sections, being cut continuously, demonstrated the method of growth and invasion of the tumour.

Diaphragmatic Hernia.—Mr. A. H. YOUNG exhibited a preparation of a case of diaphragmatic hernia, which had been discovered in the dissecting room. He pointed out the impossibility of diagnosing such a case during life.

Surgical Kidney.—Mr. C. E. RICHMOND showed specimens of surgical kidney, together with the bladder and ureters. The bladder was chronically inflamed, much dilated, hypertrophied and fasciculated. The ureters and pelves of the

kidneys were dilated and inflamed, and contained a mixture of foul urine and pus. The kidneys were enormously enlarged; the whole parenchyma was macerated in pus, and the capsules separated easily. There were large perinephritic abscesses. There had been a history of chronic retention, with much ropy mucus in the urine. Death had occurred from uræmia after the use of the catheter. There was no stricture or prostatic disease; hence it was inferred by Mr. Richmond that retention and consequent dilatation of the bladder had been due to the obstruction caused by ropy mucus.

Phosphatic Intestinal Calculus.—Mr. A. H. YOUNG showed for Mr. Wren, M.R.C.V.S., an enormous calculus found after death in the large intestine of a pony.

Dr. J. DRESCHFELD gave an account of some recent researches on thrombosis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting of this Society was held on Nov. 8th, Mr. Edward Atkinson, Vice-President in the chair.

Mr. MAYO ROBSON showed a specimen of Hydrosalpinx which he had removed from a patient ten days previously. She had had pelvic pains which prevented her from working for several years. The patient was recovering.

Mr. ROBSON also exhibited a specimen of Ruptured Jejunum, caused by a fall from a scaffold. The man presented no external signs of injury, but had symptoms of intestinal strangulation and peritonitis, for which laparotomy was performed.

Mr. W. H. BROWN showed a Ruptured Bladder, apparently spontaneous, for there was no history of injury. The patient survived four days.

Mr. EDWARD ATKINSON showed a patient from whom he had excised the Sternal End of the Clavicle for dislocation upwards. The man, who before the operation was unable to use his arm, had now a very useful limb.

Mr. MAYO ROBSON brought forward a patient, twenty years of age, in good health, on whom he had performed Supra-pubic Lithotomy three weeks before, the interesting feature of the case being the suture of the bladder and primary union of the wound.

Oöphorectomy.—Mr. W. H. BROWN read notes of a case of Oöphorectomy undertaken for indefinite nervous symptoms, which had existed for ten years, and which were chiefly referred to the pelvis. During the whole period the patient had been attending some charitable institution, and the operations of stretching the sphincter ani and the urethra and scooping out the uterus had been performed in vain. The last operation, in which normal ovaries and tubes were removed, was also without effect.—Dr. BRAITHWAITE thought the case was not a proper one for oöpherectomy.—Mr. WHEELHOUSE considered it unjustifiable to perform such operations for such indefinite symptoms.—Mr. MAYO ROBSON thought it was very seldom justifiable to remove healthy ovaries, as in the operation known as Battey's; but he was quite sure that a great advance had been made in surgery by the removal of diseased uterine appendages known as Tait's operation. He had operated on a number of cases of pyosalpinx and hydrosalpinx with great benefit, and as yet with no mortality. He always had a full consultation on the case previously, and explained the nature of the operation fully to the patient.

Removal of Ingrowing Eyelashes by Electrolysis.—Mr. BENDELACK HEWETSON described this method, and showed the apparatus. The needle attached to the negative pole was inserted for twenty seconds.—Mr. SNELL referred to a paper in which he had described this operation three years before. He had used the method for removing superfluous hair on the face in females, and in one case he had removed a moustache from a young lady.

Cataract.—Mr. SNELL read a paper on the Treatment of Cataract and other eye operations, to the exclusion of dark rooms, bandages, &c. He referred to his article in THE LANCET, of Sept. 18th, and said that experience had taught him the value of plaster as a means of closing the eye as superior to the method by bandage. He had used the method in fifty-three cases, thirty-two being operations on the lens, the remainder being iridectomies, iridotomies, sclerotomies, and operations for anterior synechiæ. Reference was made to its utility in injuries of the eyeball, and in other cases where it was desirable to keep the eye at rest. He explained the method of cutting the plasters, which was that known as "salicylated isinglass plasters."

Hemiplegia.—Mr. J. W. TEALE read notes of a case of a lady of sixty-four, who, after prolonged and obstinate constipation with albuminuria, was seized with hemiplegia on the left side, accompanied by convulsive movements of that side. In the deep unconsciousness which followed the attack (lasting fifty-four hours) the sphincter ani was stretched. This was followed by copious action of the bowels. The patient recovered a considerable amount of movement, and the albumen was reduced to a trace.—Dr. HUTCHINSON remarked on the great difficulty of estimating the value of remedies in nervous disease.—Mr. T. P. TEALE described cases of rigid sphincter without spasm, giving the sensation to the finger of a cartilaginous ring, and relieved by stretching.—Mr. FLETCHER LITTLE remarked on the less frequent occurrence of obstinate constipation among French women, due to the more general use of enemata.

Dr. ERNEST JACOB showed a Papillomatous Tumour which he had removed from the larynx of a young man, where it greatly interfered with the voice. It was a return growth, the first having been removed by him eight months previously. He showed various forceps used in such operations, and remarked on the value of endo-laryngeal operations over thyrotomy.

Dr. GRIFFITH exhibited the temperature chart from a case of Enteric Fever, showing two complete relapses, each of three weeks' duration.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Dec. 8th, 1886, Mr. Lloyd Owen, President, in the chair.

Radical Cure after Strangulated Hernia.—Mr. BARLING showed a man aged thirty-five on whom he had operated for congenital inguinal hernia eighteen months ago. At the operation blood was found in the sac and walls of the intestine, in which there was also a slight laceration. After the strangulation was relieved a tunica vaginalis was made from the lower part of the sac, and the upper part was ligatured and left in the inguinal canal. Two short wire sutures were then passed through the pillars of the ring and walls of the inguinal canal; these were tightened up and cut short. The wound healed by first intention; the patient got up with a truss on in three weeks, and has since worn a truss, until a month ago, when he was instructed to discard it. At the present time there is no return of the hernia, and the external ring is tightly closed; the wire sutures can be felt *in situ*, the testicle feels normal, and slides easily in its tunica vaginalis.

Fœtal Abnormality.—Mr. A. F. HAWKINS showed an eight months' fœtus which presented the following abnormalities: the umbilical cord was 2½ in. long; there was ectopia abdominale, the lining of the bladder being covered with a mass of meconium. The intestine opened into the left upper corner of the bladder, there being no distinction between the large and small gut; the penis was undeveloped, imperforate, and above the pubic arch, the latter being incomplete, and the halves joined by a ligamentous band. The scrotum was divided, the right testicle lying loose in the abdominal cavity, with a stalk about an inch long; the left testicle was in front of the left kidney under the peritoneum. At the back a large cyst extended from the angles of the scapulæ above to the buttocks below; it was in the median line, about the size of a tennis-ball, and was lined by a smooth vascular membrane; this contained a perfectly clear limpid fluid; no nerves stretched across it. In the anterior portion were two depressions, one the size of a crowquill, ¼ in. in depth and apparently blind; the other, which was higher, was an opening with circular and well-defined edges ¼ in. in diameter; a probe could be passed through this upwards into the vertebral column. Both feet were clubbed; the hands were normal.

The Leg Type of Progressive Muscular Atrophy.—Dr. SUCKLING exhibited a woman, aged forty, suffering from Progressive Muscular Atrophy, which had commenced in the feet and legs. There was marked emaciation of the leg muscles, the feet being dropped, inverted, and useless. The gait was of a "high-action" or "equine" character, and the knee-jerk was lost. The thenar and hypothenar eminences of both hands were wasted, and the *main en griffe* was present. The "reaction of degeneration" was also present in the tibialis anticus, extensor longus digitorum, and peronei in both

legs. The patient's two sisters were affected in an exactly similar manner, and her uncle and father suffered from wasting of the legs.

Charcot's Disease.—Mr. CHAVASSE showed a case of Charcot's Disease in the ankle of a man who some years previously had his thigh amputated for some disease of the knee.

Dr. C. J. LEWIS read a paper entitled "Clinical Observations on Syphilis of the Larynx."

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Friday, Dec. 3rd, at which twenty-two members were present.

Dr. ELDER showed the following specimens, with notes of the cases:—1. Case of unexpected Hysterectomy, in which abdominal section was made to remove a pyosalpinx. During the operation a small subperitoneal myoma was also removed. The pedicle was secured by the Staffordshire knot. During the tightening of the ligature the peritoneal coat of the uterus was fissured, from which a slight oozing of blood took place. This was stopped by sponge pressure, and the operation was completed, a drainage-tube being left in. Finding that the bleeding continued, the abdomen was again opened in the evening, and, the actual cautery and continuous suture proving ineffectual, hysterectomy was performed. The patient made a good recovery. 2. Two Diseased Ovaries: one an example of a very small multilocular cystoma; the other a cirrhotic ovary removed from an unmarried woman, who had been almost entirely disabled for five years. 3. A section of Diseased Mammary Gland, which proved to be malignant, and an Axillary Gland, likewise affected, from a patient otherwise in better health than she had been for years. There was only a seven months' history of the growth. 4. Uterine Polypus, three-quarters of a pound in weight, separated from its connexions by the écraseur, and delivered by midwifery forceps.

Dr. HANDFORD showed a boy, aged nine, in the early stage of Pseudo-hypertrophic Paralysis. Difficulty in walking was first noticed at five years of age; he has had several fits; the mental faculties are deficient. No other members of the family have had a similar affection. Patellar tendon reflex was absent; electro-sensibility was unaltered; electro-contractility to both currents much diminished and delayed. Dr. Handford showed photographs of a second case. They were taken in 1882, and the boy was then aged eleven. His elder brother died two years ago of the same disease. In November, 1886, this boy was again seen and found to be much grown and well nourished, but unable to stand or raise his legs when lying in bed.

Dr. HANDFORD exhibited photographs and coloured drawings of two cases of Pemphigus, and one of Hydroa Herpetiforme. In one of the cases of pemphigus attention was called to a marked pigmentation of the skin, and to a very unusual condition of the cicatrices left by the bullæ.

Mr. W. T. CREW, read a paper upon Anæsthesia and Anæsthetics. An interesting and prolonged debate followed, which was adjourned to a special meeting.

THE GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE third meeting of the session was held in the Faculty Hall on the evening of Dec. 22nd. Drs. W. W. Anderson, R. H. A. Whitelock, Skene Keith, F.R.C.S.E., and S. George Campbell were admitted Fellows.

Injury in Twin Pregnancy.—Dr. GLAISTER exhibited (1) a Typical Battledore Placenta, and (2) a Placenta and Fœtus, illustrative of the effects of injury in a twin pregnancy. In this case the mother when three months and a half pregnant with twins had a severe fall, which caused the death of one, the cephalic extremity of which presenting along with the head of the other at labour caused some dubiety at first as to what it could be. The fœtal remains exhibited with six inches of cord attached showed signs of post-mortem inflammatory action, one of the feet being found attached by a lymph deposit, in the form of a band, to the body, as well as other lymph formation. The placenta was in one mass, but divisible into two portions; one, the larger, containing ordinary healthy placental tissue, and the smaller being markedly white. There was one chorion and one amnion.

Dr. R. POLLOCK exhibited a fœtus which bore signs of maceration.

Dr. W. L. REID exhibited the Head of a Foetus which he had extracted after Basilysis, and a discussion ensued as to the respective merits of basilysis and cranioclasm, or craniotomy. The balance of opinion was against the former.

A Review of Thirteen Years' Private (Obstetric) Practice.—Dr. J. K. KELLY read a paper on this subject. Guarding himself, firstly, by stating that his results, owing to the imperfections not only inherent in every recorder, but also due to the conditions of general practice, must be regarded as approximately and not absolutely correct, he said he had attended, between the years 1873-85, inclusive, 2823 confinements, at which 2868 children were born. In all these the maternal mortality had only been seventeen, or one in 166. Five of these were due to causes unconnected with parturition, thus reducing the true childbed mortality to one in 235·2. Taking the last six years only, the maternal mortality had only been one in 411. In 762 primiparæ, the mortality was eight, or one in 952, and in 2061 pluriparæ, nine, or one in 229. But in his last six years practice he had 284 primiparæ, with no deaths, and 949 pluriparæ, with three deaths. The paper was full of scientifically interesting statistics, was listened to with great interest, and the discussion upon it was adjourned.

Reviews and Notices of Books.

The Parasites of Man and the Diseases which proceed from them. By RUDOLF LEUCKART. Translated from the German by WILLIAM E. HOYLE, M.A. Oxon., M.R.C.S., F.R.S.E. Edinburgh: Young J. Pentland. 1886.

THERE is no more interesting subject in natural history than that of parasitism. It embraces the whole of the animal and vegetable kingdoms, and illustrates in a remarkable way the laws of adaptation. In relation to mankind, the subject has, moreover, a special interest for the medical profession, for it not only explains the origin of certain obscure diseases and points the way to the prevention of others, but it embodies a doctrine which is capable of being most widely applied. For the "term 'parasite'"—so runs the opening sentence of the work before us—"in its widest sense includes all those creatures which inhabit a living organism and obtain nourishment from its body." This definition is wide enough to take in all the bacterial organisms that modern investigations have shown to play so important a part in the etiology of disease, and at present we are doubtless far from embracing in our view the whole range of their activities. It is, then, all-important that we should be well instructed upon the subject of parasitism, and yet it is a subject which has attracted the study of comparatively few. In the late Dr. Cobbold England lost almost her only exponent of the subject, for he was one who had devoted time and labour to its investigation. His great work on the Entozoa remains as a monument of his industry, which was further shown in the numberless monographs upon special branches of helminthology that he contributed from time to time. But even Cobbold would admit that the work of Rudolf Leuckart was greater than his own, and it is therefore with peculiar gratification that we welcome the appearance of this classical treatise in an English dress. Professor Leuckart is a naturalist, and he deals with the subject from the point of view of a naturalist, but this is no disadvantage; on the contrary, it is a real gain, since he clearly traces the origin and nature of the various forms of parasites, and dwells upon their distinctive features in a way that not only imparts new knowledge, but also points to the most effectual means for coping with these unwelcome guests of the human body.

The bulky volume before us does not comprise the

whole of Leuckart's great work. It contains a general account of the natural history of parasites, and a special description of all the forms from protozoa to cestoda. The second volume, which will include the nematode and trematode helminths, as well as the arthropod ectozoa, is at the present time appearing in the second German edition; and Mr. Hoyle tells us that the translation will proceed *pari passu* with that publication. The English edition has also had the benefit of further revision by the author himself, who contributes to it a preface. The work is confined to *animal* parasites. These, we are told, are either "occasional" or "constant," the former varying their habitat according to circumstances, and forming a link between the true parasite and the free-living animal. Then, as regards their relation to their hosts, parasites may be "temporary" or "stationary," terms which explain themselves; and the stationary forms may be "permanent" in their attachment, or "periodic" and wandering. Many examples of these varieties must be familiar to all; and what is of especial interest is the fact that the more stationary a parasite is, the more does it lose all the features characteristic of an independent animal organism. It becomes degraded in type, and assumes more the form of an appendage to its host than a separate individual. A very interesting chapter in this connexion is that upon the origin of parasites, where the author traces the changes undergone in organisms that depart from the nature of free-living beings to become dependent upon others for their sustenance, retaining often (e.g., trematodes) in their larval state the attributes and powers of the independent creature. The effects produced by parasites upon their hosts are multifarious, depending for their gravity largely upon the situation which is selected by the entozoon for its habitat, as in the case of Cœnurus cerebralis, Syngamus trachealis, or the Strongylus equinum that infests the mesenteric arteries of the horse, leading to aneurysm; or else depending on the injuries inflicted by them upon the body, as in the case of Dochmius duodenalis, which not only extracts blood for its own nutriment, but is the cause of intestinal hæmorrhage and a fatally progressive anæmia. Nor need we do more than mention the agency of such parasites as Bilharzia hæmatobium, Trichina spiralis, Tænia echinococcus, and the hæmatozoon Filaria sanguinis hominis, with which medical literature is now so fully familiar. From general considerations such as these we turn to the detailed and systematic account that forms the bulk of the volume. It is here that the reader will be especially struck by the thoroughness and knowledge which the author brings to his work. A large number of protozoic organisms are described, the majority of which are of but slight importance; but the attention of the pathologist should be especially directed to the gregarines or sporozoa, of which the coccidia infesting the liver of rabbits and mice are perhaps the most striking examples. Man also may be infested by these minute organisms, probably by contamination of food through the excreta of the rabbit. A fatal case in a man, marked by enlargement of the liver, is recorded by Gubler; and drawings are given of coccidia from the human liver from another case. Several infusoria occur in the intestinal canal, the Balantidium coli discovered by Malmesten in 1856 being one of these. It occurs in the pig very abundantly, as well as in man; but it is interesting to note that it has only been found in cases where the intestines are already diseased. The cestode worms receive, commensurate with their wide distribution and importance, a very large share of attention their remarkable metamorphosis and life-history preceding the special anatomical description of each genus. Here will be found a full discussion of the views of other writers and the records of the author's own work, which have thrown such a clear light on the history of these organisms. The Tænia saginata (better known in this country as T. medio-canellata), perhaps the most common, is first described, and then Tænia solium, with its larval cysticercus. Later we meet with an ample discussion of the Tænia echinococcus, and then of the interesting Bothriocephalus latus with its ciliated embryo, and the much-debated question of its intermediate host.[1] The zoological account is followed in each instance by sections upon the distribution and medicinal significance of the tape-worm under consideration.

Such, then, is the scope of a work which, holding the first rank among treatises upon the subject, is to be welcomed as a great addition to our literature. It is a book to be widely read and studied, and we may congratulate both Mr. Hoyle upon the excellent translation which he has effected, and his publisher for presenting the volume in so attractive a form, with the numerous illustrations that add greatly to the interest and value of the text.

The Diseases of the Prostate: their Pathology and Treatment. Comprising the Jacksonian Prize Essay for the year 1860. By Sir HENRY THOMPSON, Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital. Sixth Edition. London: J. and A. Churchill. 1886.

THIS work is so well known that we are absolved from the duty of doing much more than noting the fact of the publication of a new edition. Some of the chapters show signs of revision and addition, but for the most part it is a reprint of the former edition. Four new illustrations have been added. One notable change in the nomenclature is to be observed. We no longer read of "hypertrophy of the prostate," but of the "enlarged prostate of elderly men." Sir Henry Thompson does not think that the contour of the prostatic urethra can be modified by the passage of instruments, and he leaves his readers to infer that he does not believe that the passage of soft bougies will prevent the obstruction of the canal by outgrowths of this organ. In the cases of this disease where life is rendered a misery by very frequent and painful efforts at micturition, in spite of the proper use of the catheter, the draining of the bladder by an incision into the membranous urethra is recommended in preference to epicystotomy, which Sir Henry Thompson previously advised. We do not think that sufficient importance is attributed to the effects of the atony of the bladder so often associated with chronic enlargement of the prostate. There is much to show that in a large number of cases the symptoms are really the outcome of the atony rather than of the hypertrophy, and that the benefit obtained by daily catheterism and emptying of the bladder is to be explained by the recovery of power in the bladder which this causes.

The more recently recorded cases of malignant disease of the prostate have been added to the table of cases of this disease but cancer is stated to be more common than sarcoma. We doubt the accuracy of this view. It is more than probable that, as in the testicle, *all* the cases of malignant disease of the prostate in children are cases of sarcoma, although recorded originally as cancer, and some of the cases in adults which have been described as "medullary cancer" have probably been sarcomatous in nature. The chapter on Tubercular Disease of the Prostate opens with this sentence: "The prostate is very rarely the seat of the tubercular deposit," whereas "prostatic cancer" is spoken of only as "a rare affection." Surely these expressions do not represent the facts with sufficient accuracy. As a primary disease tubercle of the prostate is no doubt very rare, even if it ever occurs, but we have often observed the prostate enlarged secondarily to tubercular disease of the testicle, and Curling writes that the disease in the testicle is "often associated with

[1] Leuckart holds it to be the pike and turbot, but has failed to prove this experimentally.

tubercular affections of other parts, especially of the vesiculæ seminales and prostate."

By a curious oversight the much-used flexible rubber catheters are twice spoken of as "vulcanised" rubber catheters, a mistake which might possibly give rise to trouble if such an order were sent to an instrument-maker. One very marked feature of this book is the absence of reference to the writings of contemporary British surgeons. A few French and American surgeons are named, and Guthrie is mentioned several times; and we notice that the late Dr. Gross of Philadelphia is referred to as Gross of Louisville.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tome XL.: Zym. Supplément. Table Analytique. Directeur de la Rédaction le Dr. JACCOUD. Paris: J. B. Baillière et Fils. 1886.

THIS volume completes the Dictionary, and we may make a few general observations upon its scope and character. A work of this kind may belong to one of two types. It may either give short explanations of every important word, so that under such a term as "anæsthesia" the reader may find the etymology and explanation, or the nature and characters of anæsthesia may be included under some general term, such as "nerve" or "nervous system," or "spinal cord," or "sensibility." Each method has its advantages and its disadvantages. If a reader meet with a term with which he is unacquainted, he has only to refer to his lexicon, and he finds, if it be a good one and framed on the former plan, a brief and explicit account of it; but the account is of course completely isolated and unconnected. On the other hand, a dictionary constructed on the second method, though it renders it difficult for the reader to discover the meaning of a particular term unless the index is extraordinarily good, yet supplies the busy man with a thoroughly trustworthy and, if we may use the term, readable, account of the various diseases; and if he have time to read carefully such articles, he can make himself acquainted with all recently introduced words and phrases, and familiarise himself with the existing state of medicine and surgery. The Dictionary before us belongs to the latter class, and we feel bound to state that, owing to the eminence of the contributors and the care which has been expended upon the several articles, the purchasers of this work will find that they obtain a thoroughly satisfactory equivalent for their money. It was commenced in 1864, and has been published with much regularity at the rate of about two volumes a year. The number of deaths amongst the contributors, considering the time that has elapsed since the first volume was issued, has not been great. It includes, however, the honoured names of Demarquay, Gintrac, Hirtz, Laugier, Lorain Nélaton, Maurice Raynaud, Amb. Tardieu, Trousseau, and quite recently one of the most original and hard-working coadjutors, Paul Bert, whose too early death must be regretted by all who have an interest in the advancement of science. The Dictionary has been published at the remarkably cheap price of seven shillings and sixpence per volume; and considering that each volume makes about eight hundred pages, it contrasts favourably with any English, American, or German work of a similar character. As we have in our notices of the several volumes as they have appeared called the attention of our readers to the principal articles, it is unnecessary that we should recapitulate the remarks previously made. In respect of the present volume, it is to be regarded as a supplement containing several articles, such as Microbes, Chloral, Jequirity, Cocaine, and others which have either been accidentally omitted or which have come into being or into general use subsequently to the period when the articles having the same initial letters were published. The work terminates with an accurate and very complete Analytical Index by Dr. Decaye. Great praise is due to the able editor, M. le Docteur Jaccoud, for the admirable manner in which the editing has been accomplished. The general arrangement of the articles is excellent. The typographical errors are few in number and trivial in their nature, especially in regard to the spelling of the names of English and German authors, in respect to which the French are, as a rule, extremely careless, in proof of which we may just observe in passing that we saw in a work of repute some time ago Faraday referred to as Professor "Farrhadouy." We must not conclude our observations without a word of praise to MM. Baillière et Fils, for the good paper, clear print, and excellent illustrations with which the work has been published. Those who desire a good French dictionary of medicine and surgery cannot do better than place a copy of the "Dictionnaire de Médecine et de Chirurgie Pratiques" on their bookshelves, and consult it whenever they have the misfortune to meet with a rare, a refractory, or an inexplicable case.

Analytical Records.

BENGER'S PEPTONISED CHICKEN JELLY.
(MOTTERSHEAD & CO., MANCHESTER.)

MR. BENGER'S preparations are now so well known, that all we need say of the sample before us is that it is excellent. It has a delicate chicken flavour, free from the bitterness which used to interfere with the employment of peptonised articles. We gave some to a patient in a critical stage of recovery from typhoid, and found that it was taken easily.

CARNRICK'S LIQUID PEPTONOIDS WITH COCA.
(CARNRICK & CO., LIMITED, HART-STREET, LONDON.)

Like the preparation noticed above, this is only a new adaptation of a well-known and highly esteemed article, The idea, which seems to have been successfully carried out, was to unite the powerful nerve stimulant coca with an equally powerful and easily assimilated food stimulant.

FINEST MONING GLENELG TEA, 1884-85.
(T. F. ALLEN, CHURCH-PASSAGE, GUILDHALL.)

Small clean leaves, quite free from adulteration; delicate flavour. Analysis gave the following percentages:—Ash 6·27. insoluble ash 2·83, alkalinity of ash (as KOH) 1·32.

FINEST MONING GLENOGLE TEA, 1886-87.

Closely resembles the last, but with somewhat smaller leaf. Is a very fine tea. Analysis:—Ash 6·59, insoluble ash 2·65, alkalinity of ash 1·23. It will be seen that there is no important chemical difference between the two samples.

VOLTMER'S ARTIFICIAL HUMAN MILK.

This preparation deserves to be given an extended trial, by which method alone can its value be determined. It has for five years met with some success in Germany. There is no doubt of its containing the necessary principles of food. It is sold in packets that look something like soft toffee or butter-scotch. One of these makes half a pint of milk. The cream rises to the surface, and the casein sinks to the bottom if the fluid be allowed to stand. The peptone reaction comes out well.

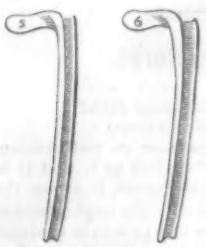
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The library of the College will be closed on Tuesday, Wednesday, Thursday, and Friday, the 4th, 5th, 6th, and 7th of January, and on Friday, Jan. 14th, for the purposes of the examinations of the Examining Board in England and the Primary and Pass Examination for the diploma of member of the College. We believe these will be the last occasions on which the library will be closed for examination purposes, as the new Examination Hall is expected to be ready by the end of March.

New Inventions.

A NEW STYLE FOR FACILITATING THE TREATMENT OF STRICTURE OF THE LACRYMAL DUCT.

THE many difficulties in the way of satisfactorily treating obstinate cases of this apparently simple affection have induced me to devise the instruments which I have the honour of bringing before the notice of the profession. These instruments are grooved styles of various sizes, as shown in Fig. 1, are made of silver-gilt, and are each arranged to slide along Bowman's bulb-ended lacrymal probes. They are so constructed that the probe and its corresponding style will together pass through an opening which will not admit the next-sized probe. In performing the operation, as soon as the canaliculus has been slit up and a probe inserted, a style of corresponding number can be gently pushed along the probe through the stricture.

FIG. 1.



Showing grooved styles. Nos. 5 and 6 have been selected for the diagram.

FIG. 2.

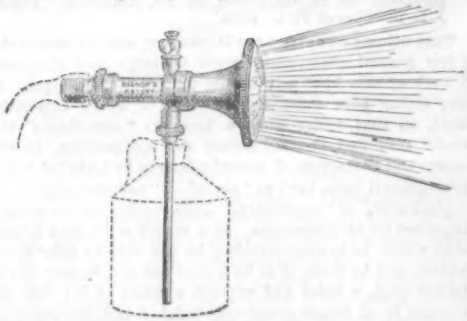
Showing probes and grooved styles.

The probe is then withdrawn, leaving the style in position. After a few days' interval the probe may again be passed along the grooved style, and the small style replaced by a larger one. This process may be repeated until as large a style as may be wished has been inserted. This may then be left in the dilated stricture. In case of irritation produced by the presence of the style, it may be withdrawn and replaced in a similar manner as before when the irritation has subsided. The cases in which these grooved styles will be found most useful are: (1) Very tight or almost impermeable strictures. (2) Strictures complicated with fistulous openings and displacement of the natural passages. (3) Strictures in children or very nervous subjects. The advantages claimed by using these instruments are: (*a*) Greater facility of introduction. (*b*) It is more advantageous where rapid dilatation is required. (*c*) There is a more perfect system of drainage, of natural as well as of inflammatory secretions. In those cases in which I have had an opportunity of putting the instruments to a practical test the result has fully realised the expectation formed of them, and I venture to think that their use in dealing with almost intractable cases will be attended with much benefit.

FREDERIC DALE, M.D. Cantab., F.R.C.S. Eng.,
Surgeon to the Scarborough Hosp. and Disp.

BISHOP'S PATENT DISINFECTANT DISTRIBUTOR.

THE simple apparatus of which we give an illustration has recently been invented by Mr. Bishop, of the pharmaceutical department of Charing-cross Hospital. It appears to us to be as valuable as it is simple, and we have no doubt that it will be extensively employed. One of the chief difficulties in the use of all liquid disinfectants is the uniform and accurate dilution of the fluid selected. "Directions for use" are of course given on each bottle, but they are very irregularly followed, and injuriously large or absurdly small quantities are often added by those who have to do the actual work. With Mr. Bishop's disinfector mistakes can easily be made impossible, and the danger of neglect is reduced to a minimum. It will be seen from the drawing that an ordinary rose jet, capable of attachment to an india-



rubber hose or to the cock of the water-supply, is made to draw in by lateral suction a definite quantity of any liquid disinfectant. The lateral tube is provided with a small stopcock, by which the supply of disinfecting liquid is regulated. We have seen the apparatus tried with strong carbolic acid and with permanganate of potash, and can testify to the ease with which the proportion of disinfectant to water may be controlled and a perfect mixture effected. The apparatus can be set so that, for example, 1 in 40, 1 in 80, or 1 in 160 parts of the disinfectant can be introduced with the water without the possibility of variation by the operator. This is exactly what is wanted in public urinals, ships, stables, and many other places where frequent disinfection is required. By a simple modification the automatic disinfection of waterclosets can also be effected. The apparatus can be obtained of the inventor (47, Maygrove-road, Brondesbury).

MENTHOL INHALER.

CUSHMAN'S patent menthol inhaler has been submitted to us by Messrs. Christy and Co., 155, Fenchurch-street, E.C. It is of pocket size, and consists of a strong glass tube four inches long, with a tapering nozzle at one end, which can be introduced into one nostril. The tube is filled in the central three-fourths by menthol crystals, and a free passage of air through these is possible by the aid of a spiral of metallic wire. Perforated corks and a kind of grate at either end of the crystals allow of ingress and egress of air without the falling-out of the menthol. Each end of the tube is fitted with corks to prevent evaporation of the menthol when the inhaler is not being used. The inhalation of air drawn through the menthol is said to prove of service in mitigating headache and lassitude resulting from excessive head-work and deficient exercise. Various neuralgiæ and nervous affections, hay fever, influenza, and catarrh may be relieved or cured by the inhalations.

ALCOHOLIC POISONING.—A child, aged five, died in Dublin last week from having swallowed a noggin of whisky administered by his father while intoxicated.

THE LANCET.

LONDON: SATURDAY, JANUARY 1, 1887.

IT is unsafe to prophesy without being able to ensure the fulfilment of the predictions made. The year 1887 is especially one in respect of which no observer having any considerable experience of the vicissitudes of politico-social life would willingly hazard a forecast. It may happen that the intentions of undoubtedly well-meaning, but possibly too sanguine, statesmen and administrators will not be carried into effect, and that, after all, the session of Parliament to be held in the year on which we are entering will not prove the most productive of beneficent and lasting results. It may chance that no measure for the reconstruction and amendment of the laws relating to lunatics will be brought under the consideration of the Legislature; or that if such a measure should be introduced it will either fall through for lack of time for its discussion, or be thrown out by one of the two Houses; besides which, it may prove to be either objectionable in itself or worthless. Whatever its fate, there are precedents for each and all of these destinies of a Lunacy Bill. It is probably fair to assume that, whatever party may be in office, and whether or not there be any exceptional parliamentary enterprise in the coming session, there will be this year a formulated scheme, of some sort, before the Houses for the development of local government; and it can scarcely be that a measure of this class will fail to raise issues, affecting the health of the community, which will demand the very serious attention of those who are engaged in the practice of medicine in its several departments. Without anticipating, it may be stated broadly that no proposal to alter the laws controlling the government of localities can be satisfactory unless it include arrangements for the more responsible and efficient administration of local affairs relating to health-preservation and the stamping out and prophylaxis of disease. We heartily wish it were reasonable to hope that the statesmanship of 1887 would rise to the dignity of that comprehensive and foresighted view of our public needs which perceived the great and urgent necessity of a Ministry of Health—the logical outcome of a policy which once found expression in the phrase, *Sanitas sanitatum, omnia sanitas*. As regards medical reform, we cannot look upon what has been accomplished in this province in any light other than that of a provisional achievement. Sooner or later, and the earlier the better, there must be another step of progress towards a fuller development of the single-portal system. Granting everything that can be said for the claims of vested interests and the so-called rights of the many licensing bodies, each and all of which give admittance to the Register, it must be affirmed that the real and permanent interests of the general community require that there shall be some statutory examination which all must pass who would practise the art of healing in these realms, and which alone shall give a *legal* qualification. The acquisition of higher titles and graduation at particular universities are doubtless to be encouraged, and the qualifications thus obtained may be held as honours; but it is unsafe in the interests of the public and the general health of the community to assume that what seems the greater attainment must necessarily include the lesser qualification for all-round practice; and it is therefore imperative that there should be one pass examination of a thoroughly practical character, which shall ensure a safe minimum of knowledge and capacity, and to which every member of the profession must submit himself, let his "superior" qualifications or special learning be what they may. It would be fortunate if it were possible to include a measure to establish this one-portal system in the legislative programme of 1887. Among the reforms which lie, to a large extent at least, within the province of the profession itself, is a sagacious concession to the conspicuously reasonable demand which has been urged on behalf of the great bulk of the medical students of the metropolis, for a degree in medicine attainable in London itself. It has been deemed undesirable that the University of London should lower the level of its high scientific standard to the needs of the average practitioner, and it is proposed that the Royal Colleges of Physicians and Surgeons should combine to constitute a Senatus Academicus conferring an average degree. This project has now been finally cast as a practical measure, and it remains only to obtain legal authority for the function. We trust that the steps taken with this view will be successful. It is manifestly unfair and unreasonable that the capital should be almost the only available city in this country wherein a "pass" degree in medicine cannot be fairly obtained. The exclusion of the Apothecaries' Society from the confederation of the Colleges for this enterprise is, we venture to think, an act unworthy of the Physicians and Surgeons on the one hand, and unjust to the Apothecaries' on the other. It should never be forgotten that the Apothecaries Society was the first body to protect the interests of the great mass of practitioners, and it has borne the burden and heat of the day's work since the passing of the Act by which "The Hall" was constituted.

IN the "Prefatory Address" which appeared in THE LANCET of Sept. 28th, 1833, while referring to the evidence afforded—by the rejection of a Medical Bill "because it did not go far enough,"—that the Legislature was at length beginning to recognise the claims of a previously neglected profession, the founder of this journal made the following reflection: "Thus we observe a chain of effects, all referable to one important cause—a feeling which is wholly indebted for its origin to the exertions of a FEARLESS MEDICAL PRESS." It was to sustain this character and to assert and defend the rights and privileges of the medical body as "a profession to which is entrusted the guardianship of the public health," while acting the part of a friendly censor and critic, and striving to break down all injurious monopolies and reform abuses, that THE LANCET was established. The idea of creating a thoroughly independent and free organ for the profession was the dominant purpose of Mr. WAKLEY'S mature life, and to render the attainment of his purpose the more certain, his desire was that the proprietorship of the journal should continue in his family

By the lamented death of Dr. J. G. WAKLEY, who, being joint proprietor with THOMAS WAKLEY, F.R.C.S., had also acted as Editor since his father's decease in 1862, the proprietorship devolves on THOMAS WAKLEY, F.R.C.S., who has now brought in his son, THOMAS WAKLEY, jun., L.R.C.P. Lond., and the editorial direction will from this time rest in their hands. As in the past, so in the future, THE LANCET will be conducted as the organ of the profession as a whole, and not of any association, society, company, party, or clique. That the distinctive position occupied by this journal is appreciated by the profession is apparent from the striking fact that, although in every instance subscribed for, or purchased, for its own sake purely, and not distributed as the organ of a special body, it has attained a steadily increasing circulation, and is now more largely read and quoted than any other medical journal in the world. To meet the requirements of a widening circle of readers, the capacity of the journal has been enlarged, so that it now contains more matter than occupied its pages seven years ago, to the extent of about 20 per cent. And this very considerable increase calls for further development, to meet which the journal will be permanently enlarged to ninety-six pages in the present and subsequent issues, thus affording augmented facilities for the publication of original papers and the communication of new and useful facts and opinions, to the advantage of the profession, and, indirectly, of the public. The several departments in which the work of the journal is cast will be extended and strengthened as opportunity offers, and with a view to its increased usefulness as a medium of medical news second editions will be issued whenever it seems desirable, as on the occasion of the recent election to the Medical Council. No pains will be spared to enhance the value of the periodical to its readers, while nothing will be allowed to impair its efficiency as a representative and leading organ of the great body of medical practitioners. It might be unseemly to say more, but this much needs to be said, at the commencement of a year on which THE LANCET enters under, to some extent, new auspices. The modifications which have been made, or are contemplated, will be apparent to our readers; but the purpose we cherish and are seeking to carry into effect is that which the founder of the journal conceived and so successfully compassed during his lifetime (and which the late DR. WAKLEY still further developed); and it cannot be better expressed than in his own words—namely, to ensure "that, as far as it is possible for the cultivation of the science of medicine to alleviate human suffering, the agonies of our fellow-creatures shall be made to succumb to the power which the human mind is capable of exercising when fortified by a knowledge of that science." In a very special sense it is true of all that interests us as a profession, and which makes our function one of the highest in the service of humanity, that "knowledge is power." To extend this knowledge, and to develop and secure the free exercise of that power which is antagonistic to disease, relieving suffering and prolonging life, has been and must ever be the one worthy object for which a fearless medical press exists, and its promoters strive.

THE peculiar joint affection that complicates certain cases of tabes dorsalis has been a fruitful source of controversy, and its precise pathogeny can hardly yet be considered established. Professor CHARCOT, who first described it, compared it to other nutritive changes depending upon nerve lesion, and has always maintained its peculiar specific character. The debate at the Clinical Society two years ago served, however, to show that, at any rate in this country, this view was not universally held. It would seem almost as if there was a natural divergence of opinion, according to the point of view from which the subject was regarded. The neurologist takes his stand on the primary disorder of the spinal cord, and deems the articular and osseous changes to be essentially secondary; the surgeon thinks mainly of the joint disease, and sees no essential difference between its anatomical features and those of arthritis deformans. To him the connexion is little more than a coincidence; the cord changes are independent of any direct relation to the articular. The Society still awaits a report from a committee appointed on that occasion, but if rumour be true, the committee are unable to arrive at any definite conclusion. It may then be useful briefly to revert to the opinions upon the subject expressed by Professor VIRCHOW at a late meeting of the Berlin Medical Society, especially as his standpoint is strictly that of the pathologist who investigates the nature of a disease from the lesions that mark it. It must, however, be observed that the clinical cause of tabetic arthropathy is in itself different from the joint affections with which it is contrasted, mainly in the rapidity with which the extensive joint destruction is evolved, and the entire absence of any inflammatory phenomena, characters which, taken with others, all point, as Dr. ROTTER, who introduced the subject at this meeting, stated, to something special and peculiar to tabes.

Professor VIRCHOW began his remarks by holding that it was quite legitimate to compare this affection with arthritis deformans; a condition, however, which is by no means well defined. Thus, it may be a general or multiple affection, idiopathic in origin, or it may be purely local, limited, and traumatic; and, moreover, changes similar to those of rheumatoid arthritis occur in old-standing dislocations, and (rarely) in syphilis. Between arthritis deformans and arthropathia tabidorum (as Prof. VIRCHOW prefers to style it), no marked anatomical distinction is possible, and it is owing to the disease being described in all stages that stress has been laid by some on variations which do not actually exist. In tracing out the series of changes that eventuate in the characteristic destruction of the joint, Professor VIRCHOW stated that the earliest change is in the cartilages, then follow synovial changes, then capsular, and finally extracapsular; and throughout the whole process no distinctive inflammatory lesions may arise. It is a progressive tissue change, but so masked and altered by degenerative processes that, looking only to the final result, it might be attributed merely to mechanical friction, to 'wear and tear." (It is of interest to note here that Mr. ARBUTHNOT LANE contributes to the current volume of the Pathological Society's Transactions a paper in which he argues strongly in support of the view that mechanical causes alone may suffice to induce the joint-lesions characteristic of rheumatoid arthritis.) But the erosion and final entire destruction of the cartilages are preceded by a hyperplastic

process, which begins at various points of the surface layers, and it is after this stage (too early to be often noted) that the destruction takes place, through fatty degeneration of the proliferated cells. Similar hyperplasia occurs at the margins of the cartilage, and here ossification may ensue, the new-formed bone often extending on to the neck of the bone itself. Later on the head of the bone is laid bare and gradually wastes, and from ossification of the marrow the exposed end becomes dense and porcellaneous; whilst the synovial membrane becomes the seat of villous growths in which bony or cartilaginous nodules may form. Lastly, the ligamentous structures are destroyed or ossified, and the disorganised joint loses all its normal characters, from the osteophytic formations that surround it and the atrophic changes that have destroyed the extremities of the bones. Now in the tabetic joint the chain of events is precisely the same, but the processes are hastened, and evidently the result of more irritation. To illustrate this Professor VIRCHOW exhibited two specimens, in one of which only the early stage of cartilage lesion was present; in the other the internal changes were extreme, with a great amount of ossification outside the rest of the capsule. The reason for the more rapid destruction of the joint in tabes is, he thought, to be found *not* in any direct trophic disorder affecting the particular joint, but in the general loss of nutrition of the subject of this disease. Tabes, then, would be a predisposing cause to the arthropathy, but the arthropathy itself would depend on local influences, which in consequence of the deranged nutrition operate with increased severity. He was sceptical as to the alleged occurrence of arthropathy in the early stages of tabes having any connexion with the changes in the cord, and suggestively alluded to the influence of syphilis as being competent to initiate the articular lesions; just as it is also doubtless in many cases the cause of the spinal sclerosis. The opinion of so high an authority as Professor VIRCHOW on this subject is worth attention, and his statements may do something to clear the way to the adoption of more tangible views than at present prevail as to the nature not only of tabetic arthropathy but also of rheumatoid arthritis.

THERE are few more pressing matters than the medical succour of the sick poor. The questions which challenge attention in connexion with this subject are urgent, and of public not less than professional interest. We may be excused for looking at the matter from a point of view specially important to the practitioners of medicine, albeit we would not ignore the more popular aspects in which it is desirable that it should be regarded.

It must be freely admitted at the outset that the medical profession is not animated solely by sentiment and the impulse of benevolence, in lavishing its time and skill on the treatment of cases occurring among the indigent. We are not less humane than our fellow-men, but it would be absurd to lay claim to exclusively charitable motives. A field must be found for practice, if our students are to be trained in clinical work, and it is only by clinical labour in a large sphere that such experience as qualifies a physician or surgeon to offer advice to his colleagues can be acquired. Such opportunities for the study of our art and the mastery of its mysteries as the case demands can only be secured by the organisation of an extensive system of hospital relief for the poor, and therefore it must be conceded that the interest of the medical profession, as a profession, in hospital work is *professional*. In saying this we do not abate one jot of our claim to be credited with a full share of the philanthropy which animates the mass of right-minded citizens, but it is inconsistent with that feeling of self-respect which has its foundation in honesty of view and purpose to lay claim to more than this.

Having said thus much by way of clearing the position, it may be asked why—seeing that professional enterprise in hospital charity is in the main a business undertaking—should we, of all other professional men, affect to recoil from the idea of business? It cannot be that there are no limits to this enterprise marked out by prudence and sound policy. In plain truth, there must clearly be a point beyond which it is selfish on the part of any one class of practitioners to push their ambitions and endeavours to the damage of their fellow-practitioners and the profession as a whole. Unless we are to assume that the great body of the medical profession is composed of men who labour solely for the love of science and humanity, and that they are not, in large measure at least, dependent upon the emoluments derived from professional business for their support and that of their families—propositions too ridiculous to be entertained,—it must be manifest that the extension of hospital charity further than the boundary line determined by the actual indigence of the subjects of relief is a direct injury to the profession. We cannot even admit that it is legitimate to afford facilities for the gratuitous supply of advice to the sick poor unless such advice is actually needed. There is a great deal of spurious sentiment about the glamour cast over this subject on platforms and in the reports of committees. No one for an instant doubts that it is proper to give medical succour to those who cannot otherwise procure it, nor is it questioned that all the successful treatment a case demands ought to be furnished in every instance of real need. The medical profession is fully prepared to make any sacrifice to these ends. What the great mass of practitioners are *not* prepared to do is to bolster up a system by which they are required to look on with amiable equanimity whilst a vast proportion of the classes who can pay, reasonably well, for advice and medicine are not simply supplied with both gratuitously, but persistently touted for by rival charities administered by injudiciously philanthropic committees. We are not in the least degree surprised, nor can we say that we are sorry, that this feeling has at length found expression, and that the body of practitioners are beginning to move in the matter.

Hospital charity, as regards both in and out-patients—though more particularly, perhaps, the latter,—is rapidly becoming an abuse. The aggregate of relief given, and boasted of, has reached a total which constitutes a very heavy drain on the resources of the profession as a whole. It would perhaps be under the mark to estimate that fully five-and-twenty per cent. of the relief given is not actually required. By this we mean that if it were impossible, or even a little less easy than it now is, to obtain gratuitous medical and surgical aid at the hospitals, probably one-fourth of the total number of persons

now relieved gratuitously would obtain assistance at the hands of the profession generally, and *pay for it*. It is not succour necessary to save life the hospitals are giving, but something to spare the pockets of persons who could, if they needs must, find the means of obtaining it by reasonable payment.

We offer no apology for speaking thus plainly on a subject of very immediate and widespread interest. It is time to cast aside traditional prejudices, and set the truth before our readers, and, through them, before the public. The medical profession is long-suffering, but it must sooner or later defend itself against the development of a policy which exaggerates self-sacrifice until it verges on the suicidal. We cannot hesitate to affirm that the amount of gratuitous relief afforded almost indiscriminately by medical charities has reached proportions which are not simply formidable but overwhelming, and the majority of practitioners will agree with us that this is rapidly becoming a cause of scandal. It is neither wise nor kindly on the part of the medical staffs of hospitals to shut their eyes, or affect to shut their eyes to the fact that they are inflicting a very serious and increasing injury on their fellows by assisting in the folly of pushing unnecessary charity beyond all due bounds.

WE are very pleased to be able, in this our first issue for a new year, to record the completion of the initiatory step towards the securing of degrees for medical students educated in London on the same terms as those which obtain in the great medical teaching centres in Scotland and the provinces. The Royal College of Physicians of London and the Royal College of Surgeons of England have now finally settled that it is "desirable and practicable to grant degrees in medicine and surgery to persons who have passed the conjoint examinations of the two Colleges"; also that "an application be made to the Crown by the two Colleges, acting conjointly, for power to confer degrees in medicine and surgery." The grievance of the average London medical student, that he is unable to obtain a degree under conditions similar to those which prevail elsewhere, is now definitely admitted, and the official authorities who determine his curriculum and period of study are pledged to its removal, if they can do so. A decisive step has been taken, and from this there can be no retreating. An application to the Crown for a Charter empowering the two Colleges, acting conjointly, to grant degrees, has been determined on. This conjoint action preserves the individual character of the two corporations respectively, and is only a necessary move forward in harmony with the spirit and the needs of the time. The Committee of Delegates appointed by the two Colleges will now have to consider upon what terms the degrees shall be granted, and these will have to be practically decided on when the application for powers is made. The principle is agreed to, but the working out of the details will require most grave and serious consideration, and must be settled speedily and without any waste of precious time. It will probably be dependent on the nature of the detailed scheme whether the opposition which is sure to be forthcoming will be successful or futile, and whether the application for powers will be supported earnestly and thoroughly by the teachers and the profession as well as by their leaders in the Colleges. No thought of an "inferior degree" can be entertained for a moment, and doubtless it was a fear lest some such result might be the outcome of the movement that caused the taking of a hostile vote to be insisted on by the very small minority at the College of Physicians on the 23rd ult. The degrees must be equal to the Scotch and provincial degrees, and when this equality is secured, no higher level is required or called for. The degrees must be "pass" degrees only. The Senate of the University of London has over and over again affirmed that all its degrees must be considered "honours" degrees, and it is from its determination to remain immovable at this standpoint that the present difficulty and grievance have arisen. The lowest preliminary examinations in Arts recognised by the General Medical Council are quite insufficient for a degree, and candidates for the distinction must be compelled to show a higher standard of general education. A revision of the present examinations for the qualifications of the combined Colleges is also necessary, so that some biological knowledge on the part of the intending graduate should be secured. The degrees of M.B. and B.S. might then be given on the existing professional examinations, and a decided tone would be added to the higher degree if some such suggestion as Sir WILLIAM GULL'S were adopted—that a further examination in *clinical* medicine and surgery be instituted for the M.D. and M.S. respectively. If the details of the scheme follow these lines, no one will be able to sneer at the degree as an "inferior" one, and much will be done towards raising the general and special education of the average London student. This is a reason for its existence which is too important to be overlooked.

Before leaving the subject, we must point out the great assistance to the movement, both in council and debate, which has been afforded by Sir WILLIAM JENNER and Mr. SAVORY, the Presidents of the two Colleges, and by Sir H. PITMAN, the Registrar of the College of Physicians. Dr. WILSON FOX and Mr. DURHAM led the movement by first bringing it before the Colleges for their official consideration, and it has been most generously supported, among others, by Sir ANDREW CLARK, Drs. BRISTOWE and WILKS, by Sir JOSEPH LISTER and Messrs. MARSHALL and MACNAMARA. Sir WILLIAM GULL and Drs. LATHAM and PRIESTLEY, by an acknowledgment during the recent discussion of their conversion to the necessity of some such scheme, have rendered it a conspicuous service. We must also refer to the late Dr. MOXON, who at once saw the justice of the agitation in its favour, and by his articles in our columns and his speeches gave it an impetus such as only his characteristic fervour and singleness of purpose could impart. His wise counsels in directing and assisting the progress of the movement will be much missed.

IT was decided at a meeting on Dec. 27th last of the governors of Addenbrooke's Hospital, Cambridge, that a dental department with two dental officers should be instituted, the cost not to exceed £50.

THE Queen has been pleased, on the recommendation of the Secretary for Scotland, to appoint John Theodore Cash, M.D., Professor of Materia Medica in the University of Aberdeen, in the room of Dr. Dyce Davidson, deceased.

Annotations.

"Ne quid nimis."

WOOLWICH AND SANDHURST.

THE information given in the reports of the Board of Visitors respecting the health of the cadets at the Royal Military Academy, Woolwich, and the Royal Military College, Sandhurst, is of the most meagre character. Prior to 1885, a return, by the medical officer, of the cases of sickness occurring among the cadets was always appended to the report of the Visitors, and occasionally remarks by the medical officers were incorporated in it. Last year the hospital return was omitted for the first time, and it has not been restored in the reports just issued for 1886. We are disposed to attribute the omission to the remarks, not always of a complimentary nature, which we have felt it our duty to make upon the health-condition of the two establishments, and the necessity for a careful inquiry on the part of the military authorities into the causes of the abnormal amount of sickness which the returns showed to prevail, especially at Woolwich. In this view we are confirmed by a remark in the report of the Visitors to Woolwich in 1885: "It is not possible to draw a comparison between the cadets of the Royal Military Academy and those of the Royal Military College, as the position and the surroundings of Woolwich will in no respect compare with those of Sandhurst." But surely, when there is such a difference in the cases of sickness as was shown by the medical returns in 1884, when Woolwich had 1227 cases per 1000 against 639 at Sandhurst (see THE LANCET, Dec. 20th, 1884), it is only a fair presumption that some other causes of sickness are in operation besides "the position and surroundings" of Woolwich. We cannot but think that it would be a much more judicious course to furnish correct information respecting the health of the cadets, than to give grounds for the inference that it is so unsatisfactory as to require the suppression of the established returns respecting it. In the reports for 1886 the only definite information respecting the health of the Woolwich cadets is, "The medical report shows a daily average of 2·90 on an average of 219 gentlemen cadets"; and of Sandhurst, that "the medical officer reported their health to have been good during the past year, that there had been no cases of serious illness, and that the average daily sick was 3·78 on an average strength of 304 cadets." These figures show the constantly sick at Woolwich to have been in the proportion of 13·2, and at Sandhurst of 12·4 per 1000, a sufficiently high ratio, from which it is impossible, however, to draw any conclusions in the absence of all information as to the diseases by which it was caused. The want of this is the more to be regretted as the conditions in which the cadets are placed at Sandhurst, as regards their rooms and the hospital accommodation, appear to be much more satisfactory than at Woolwich. We trust that in future reports of the Visitors the returns of the medical officers may again be given, as formerly, for the satisfaction of the parents and friends of the cadets. We were much pleased to see that at a recent inspection at Sandhurst the Duke of Cambridge stated that "he desired the medical officer should receive his special commendation for the skilful manner in which he had stamped out what threatened to be an epidemic of diphtheria some little time since." It was a well-earned compliment to Brigade Surgeon Clarke, the able and zealous medical officer of the College.

INTER-COLONIAL MEDICAL CONGRESS.

THE South Australian Branch of the British Medical Association recently appointed a committee to take steps in the initiation of an Inter-Colonial Medical Congress, to be held at Adelaide this year during the Jubilee Exhibition period. The cordial responses received from South Australia and the adjoining colonies to the preliminary announcement of this committee warrant, we understand, the prosecution of the scheme with every anticipation of good results. It has been decided to hold the Congress in August and September, during the University vacation, the meeting to last not more than six days. The promoters of the Congress, we are glad to learn, wish the meetings to be under the direct guidance of the whole body of the profession in the colony, as it is most desirable that the Congress shall be of a thoroughly representative character. It is anticipated that the attendance from the sister colonies will be large and influential. We congratulate our colonial brethren upon their enterprise and courage in organising a rival to the great meeting of the profession which is to be held about the same time in the United States, and sincerely trust that their anticipations of success in their undertaking may be realised: though they cannot command success, they may at least deserve it.

THE REGISTER OF MEDICAL STUDENTS.

THE third report by the Statistical Committee of the General Medical Council has just appeared. It contains a summary of statistics regarding medical students registered as commencing their curriculum in the quinquennium of 1871-75. The investigation of the committee, to the success of whose labours, it is scarcely necessary to say, the aid of the registrar, Mr. W. J. C. Miller, has been indispensable, has included the tracing of 6403 registered students, of whom 4472 were found to have gained a place in the Medical Register. The committee propose to elaborate their work by constructing a census of the profession at two selected annual periods, the years chosen for this purpose being 1881 and 1886. "In such quinquennial censuses," remarks Mr. Marshall (chairman of the committee), "many most interesting points will be cleared up, such as the strength of the profession, its distribution amongst the population of town and country, its fluctuations, its migrations, and many other details relating to titles, qualifications, age, mortality, and so forth. The construction of these censuses will be a comparatively easy task, as compared with that already accomplished. It will be undertaken by the same diligent and accomplished agents as we have hitherto had the advantage of engaging, and care will be taken to make the basis and outcome of the inquiry as sound and accurate as possible."

SMALL-POX INOCULATION.

IN a lecture recently delivered at St. Mary's Hospital Mr. Shirley Murphy adduced some evidence to show that there was a probability that the virus of small-pox obtained from the initial vesicle produced by inoculation of small-pox differed in its action from that obtained from the general eruption; and he expressed the opinion that it was probable the different results attending the operation of inoculation by various operators might be dependent upon the use of virus procured from the one or the other source. Thus of 182 inoculations performed in the years 1721 and 1722, three persons died, or nearly one in sixty; and in Dublin, in 1723, of twenty-three persons inoculated, three died. The not infrequent death from inoculated small-pox led at first to much opposition to this method of protection against natural small-pox, but later it was found that inoculation could be performed without risk. In an account given by Sir George Baker of the

extraordinary success attending the inoculations of Daniel Sutton, of Ingatestone, in Essex, who in three years inoculated some 20,000 persons without bad result, he attributed this success to the fact that Sutton allowed his patients to enjoy fresh air during their illness; while Dr. Glass of Glasgow believed that Sutton's treatment in encouraging perspiration was responsible for their recovery. It is clear that Sutton professed to have a secret in his treatment, although this secret is only mentioned in relation to the composition of certain medicine; but Sir George Baker, curiously enough, observed that "What is extremely remarkable, he (Sutton) frequently inoculates people with the moisture taken from the arm before the eruption of small-pox"; and Dr. Chandler, who also witnessed Sutton's work, referred the chief benefit of his plan to the infecting humour being taken in a crude state "before it has been ultimately variolated by the succeeding fever." Baron Dimsdale, who took much interest in Sutton's proceedings, and subsequently himself practised inoculation, closely imitated his method, and was very successful in his results. If, as Mr. Murphy pointed out, the virus of the initial vesicle differs in any respect from that of the general eruption, some difference may also be found in the ease with which the bovine animal is inoculated with the one and the other virus. Certainly this point deserves further investigation.

M. VERNEUIL AT BRUSSELS.

M. VERNEUIL has been paying a short visit to Brussels, where, in return for the hospitality of his Belgian *confrères*, he treated them to several interesting and instructive speeches and lectures. They seem to have kept him somewhat hard at work, for on the Saturday (Nov. 27th) he was present at a meeting of the Royal Academy of Medicine, where he gave an important address on Vertebral Disease, in which he insisted on the importance of prolonged rest and immobility of the vertebral column, mentioning that when absolutely necessary he let out pus, injecting subsequently a 5 per cent. solution of iodoform in ether. On the Sunday he gave a lecture on Tuberculosis at the Hospital St. Jean, and on the Monday visited the surgical and children's wards in the Hospital St. Pierre, where he gave clinical lectures on cases of Comminuted Fracture, Abdominal Tumours, and Hip Disease which were shown him, delighting his audience with his diagnostic acumen and his happy phraseology.

"COUP DE VENT."

OUR neighbours, the French, have the advantage of a language which is both epigrammatic and comprehensive, and is capable also of giving expression to an idea with the greatest scientific exactness. It has therefore been acknowledged to be the best language for European diplomacy, as well as that of polite intercourse at nearly every Court of Europe. The "coup d'œil," the "coup d'état," and the "coup de vent" of the French have no such expressive equivalents in any other European language. The sudden changes in the weather of the past few weeks, from days of bright sunshine to murky nights, from days of damp and fog to sharp frost with dry and bracing air, from wind rising to a hurricane to atmospheric stagnation, with scarcely sufficient movement to divert the upward current of the smoke from our chimneys, and these alternations varied from time to time by a keen piercing north or north-east wind, have brought home to many of us the chilling influence of a "coup de vent." A very much lower temperature can be borne when the atmosphere is at rest than when it is in active motion. In Captain Parry's account of his voyage to the North Pole it is stated that the crew suffered less when the thermometer was 55° below zero—i.e., 87° of frost—in a still atmosphere, than when the thermometer was as high as zero, with a keen wind blowing. Stagnant dry air is a very bad conductor of heat: thus the film of the atmosphere immediately surrounding the body parts very slowly with the warmth which is abstracted from the body; it becomes, indeed, an intermediate temperate coating between the colder atmosphere and warmer body; but when air is in motion this intermediate protecting film is removed, and a chilling atmosphere is repeatedly brought nearer the surface of the warmer body, with a risk of producing what the French graphically call a "coup de vent."

THE METROPOLITAN PUBLIC GARDENS ASSOCIATION.

THE fourth annual report of the Metropolitan Public Gardens Association has just been published, and is a highly satisfactory one in every respect. The Association, which works in conjunction with the National Health Society, was formed, as most of our readers are doubtless aware, for the purpose of supplying one of the most pressing wants of the poorer districts within the metropolitan area—namely, to provide breathing and resting places for the old, and playgrounds for the young, in the midst of densely populated localities. The following is a brief summary of the work accomplished during the past year:—Seven recreation-grounds have been laid out and opened to the public; trees have been planted in one garden and one thoroughfare; seats have been placed in ten public gardens; grants of money have been made to five public gymnasia; two commons have been improved; and assistance has been given in the formation of a swimming-bath and a recreation club. The income has been raised from £7283 in 1885 to £10,917 in 1886, and the membership has increased to 448. London is year by year becoming more and more populated and extended. The ever-widening girdle of bricks and mortar, the ever-increasing height of dwellings and warehouses, the tendency that there is for the current of human life from all directions to flow towards the metropolis as a centre, can have but one possible effect, and that is to render London less and less a place where the bodily functions can have full and natural play, where bone and muscle in the young may be developed, and where constitutions are able to ward off disease and postpone decay. The Association, by securing open spaces, is adopting the best method to meet this threatened evil, and those who have the health and welfare of the toilers in this modern Babylon at heart will be unable to resist Lord Brabazon's appeal for renewed, increased, and fresh donations and subscriptions to the funds of this most useful and deserving Association.

HOSPITAL REQUIREMENTS.

SIR RUTHERFORD ALCOCK writes a long letter to *The Times* on the present serious deficiency in hospital support, the chief burden of which is to suggest the urgency of inquiry into the whole subject by a Royal Commission. The medical profession has had very recent experience of the limited powers of a Royal Commission. Such a Commission, composed of most influential men, took a great deal of trouble and a great deal of evidence, and came, by a majority, to certain recommendations for legislation on medical matters. But the legislation which followed came grievously short of the recommendations. The best portion of Sir Rutherford's letter is that in which he elucidates the grievous deficiency in the incomes of all the hospitals. He thinks the urgency of the case is not realised by the public. We hope his letter will help the public to do so. If not by a Royal Commission or otherwise, the facts must be faced and the remedies pointed out.

ADELAIDE UNIVERSITY AND MEDICAL EDUCATION.

THE University of Adelaide has recently instituted a medical school, not without some opposition, it being contended that the Universities of Melbourne and Sydney are amply sufficient to supply medical graduates to the colony, which is already becoming as much overstocked by the profession as is the mother country. The scheme, however, has been warmly taken up, and subscriptions to the amount of £16,000 were announced at the meeting of the Senate, which decided to make this new departure. Such private endowments will now be supplemented by grants of public money. For our own part, we do not see why South Australia should decline to further the cause of higher medical education, or why its resources are not adequate to supply a properly equipped medical school. The question of overstocking the profession is one which can always be met by the stringency of the tests imposed on those who seek to enter it.

THE CROWN SEAT FOR IRELAND IN THE MEDICAL COUNCIL.

ALL who knew Dr. Lyons will deeply regret his death. He was one of those genial Irishmen who could hold a different creed without bating any of his respect for those from whom he differed. It would have been better for Ireland if more of her representatives had had more of his nature. The Government will have to fill his place in the Medical Council. Many provincial Irishmen are hoping that advantage may be taken of the vacancy to give the Irish practitioners in the Provinces a representation which even Direct Representation has not disposed them to secure. We should be glad to see the Government take this liberal view of their opportunity. We must admit that the practitioners of Ireland, by failing to elect one of their own rank when they had the chance, have given occasion for the remark that they prefer Dublin consultants to provincial fellow-practitioners. But the Government should make allowance for the enormous vantage-ground enjoyed by the Dublin magnates in an election; and it would act generously in supplying the conspicuous defect of the Medical Council—a typical representative of the general body of practitioners in Ireland.

TOOTH POWDERS.

PROPHYLACTIC medicine is of greater value to the public than curative, although they are slow to give it its due; hence the subject of tooth powders may be of some interest. The necessity of keeping the teeth clean, with a view to the prevention of future trouble, is overlooked by too many, even in the higher classes, sometimes from carelessness, sometimes from ignorance. Now, cannot the medical attendant do a great deal to combat this state of things? The dental surgeon is often asked, "How soon should the first tooth-brush be used?" "As soon as there are teeth to use it upon" should be the reply. An ideal tooth-powder should be alkaline, since acids dissolve the tooth substance; finely pulverised, that it may not mechanically abrade; antiseptic, to prevent decomposition of food lodged between the teeth, and perhaps to destroy the microbes which are always found choking the tubules of carious dentine; it should contain nothing irritating to the gums; and, lastly, it should be pleasant to the taste, or it will not be used. Fluid dentifrices do not, as a rule, clean the teeth effectually, unless they contain some ingredient which acts upon the enamel itself; and those preparations which are eulogised as making teeth white or preventing deposit of tartar, should be avoided. Charcoal was at one time a very popular form of dentifrice, and is even now largely used, but from the amount of silica it contains it will rapidly wear away teeth that are not of exceptional hardness; and, moreover, the gums in some instances become tattooed in a curious manner from absorption of minute particles. Pumice-powder, again, is too gritty; and camphorated chalk is said to make the gums spongy. Precipitated chalk forms the best basis for a tooth powder, to the base of which may be added pulv. saponis and ol. eucalypt., a drachm of each; and, if there is no objection to the taste, half a drachm of carbolic acid.

REFORM OF THE SCOTTISH UNIVERSITIES.

A MOVEMENT very similar to that of the Members of the Royal College of Surgeons in England for representation in the Council now obtains in the Scottish universities. The members of the University Council, consisting chiefly of the graduates, desire to have a larger representation than they have at present in the University Court. They protest that this desire is not based on any selfish or revolutionary purpose, but on a conviction that such representation will give an impetus to important changes in the regulations and administration of the University, tending to raise their standards, especially in Arts. It is not proposed to interfere with the vested interests of existing professors, but to endeavour to give the University Court more power over the curriculum and the recognition of extra-mural teaching. Lord Wemyss has accepted the office of President of the Association of the Council of the University of Edinburgh, and from the chair of the Association has expressed his agreement with the objects of the Association, and several of the professors have already done the same. A similar Association exists in Glasgow, and Professor Edward Caird has given it valuable assistance. The Scottish universities are being, and will be, subjected to much criticism, the best answer to which will be the readiness of their professors to accept any reasonable improvements in their constitution, even if involving some control of the powers of the Senatus.

HOME FOR LOST DOGS.

EVEN those who objected to the muzzling of dogs will not complain of the translation of ownerless animals from the streets to comfortable quarters. The temporary Home for Lost and Starving Dogs, Battersea, has received into its kennels over 40,000 animals in the course of the year and ten days during which the muzzling order has been in force. This institution is not responsible for the seizure of dogs; it acts as a trustee of public property. We are sorry to learn that there is a debt of some £1500, the result chiefly of the great demand on the Home during the period of the police edict. The committee appeal for subscriptions to meet their present difficulty. Assuredly the object to which the money has been applied was in the highest degree humane; the results, both for human beings and dogs, have been entirely beneficial. There can be little doubt that the purse of the charitable will be opened with the usual liberality of the British heart.

BULLET WOUND OF ABDOMEN.

EARLY on the morning of Dec. 25th a man aged twenty-three was admitted into St. Thomas's Hospital, under the care of Mr. Mackellar, suffering from a bullet wound of the abdomen inflicted about two hours previously. The bullet, which had been fired from a revolver at a distance of about 18 ft. above and to the left of the patient, had made a small opening 2 in. above and 1 in. to the inner side of the left anterior superior spine of the ilium. There was no evidence of wound of the bowel, and there was comparatively a small amount of shock; but on the following day sym-

ptoms of peritonitis developed, and the abdomen was explored. Mr. Mackellar found two perforations with bruised edges in the lower part of the sigmoid flexure, from which there had been an escape of contents of the bowel; these openings were secured by ligature, the effused blood and other fluid carefully washed out, and the wound closed and drained. The patient rallied from the operation, but died a few hours later. At the post-mortem examination the bullet was found lodged in the right side between the bladder and rectum. No other portion of bowel had been wounded. The openings in the bowel were not sutured on account of the collapsed condition of the patient, the distance of the wounds from the surface, and the fixation of the gut, which prevented its being brought out of the abdomen. For similar reasons the question of excision of the wounded part was dismissed. The man was acting as a "wait" at the time of receipt of the wound, and his sad death ought to act as a warning to those who are in possession of fire-arms and careless in their use.

LIFEBOAT CREWS AND LIFE INSURANCE.

WHILE the recent terrible disaster to the Southport and St. Ann's lifeboats still remains fresh in public sympathy, it may be well again to refer to the subject of life insurance as a provision against the death of the bread-winner for the maintenance of his widow and orphans. By this sad misadventure twenty-seven valuable lives have been lost, and what makes it even more deplorable is that the men to save whose lives they lost their own were all rescued before the latter started on their mission of mercy. Among other lessons to be learned from this disaster, we may trust that it will not in future be permitted that a man suffering from well-advanced phthisis shall be entrusted with the responsible duties of coxswain—a position requiring the soundest mind in the soundest body. We may also expect further improvements in the construction of lifeboats, and better means of communication between lifeboat stations within view of the same points of danger, though out of sight of each other. But when all this has been done, and the lifeboat service has been made as perfect as possible in human hands, we must still expect that accidents and misadventures will happen in the future. It is very gratifying that a sum has been raised, not only sufficient to provide amply for all the bereaved families, but even to leave a surplus, which a contemporary suggests should form a nucleus of a fund for the relief of sufferers from future similar disasters. Would it not be better, however, to apply any such surplus in aiding lifeboat men to effect an insurance on their lives against all risks, or, if this be not practicable, specially against the risk to which they are necessarily exposed? We would earnestly commend to the Royal National Lifeboat Institution the adoption or modification of the plan carried out for many years by the Commissioners of Northern Lighthouses. Each lighthouse-keeper is insured for £100 in the Edinburgh Life Assurance Company. He must be an "insurable life" before he can be admitted into the service, and from his wages there is an annual deduction of £3 to pay the premium. In the event of his death, the principal sum is given as he may by will direct, or, if he die intestate, to his next of kin. At present the rate of premium for lifeboat men is no doubt high; but it may also be suggested to insurance offices whether it would not be to their advantage to offer facilities for such insurance. Should this suggestion be carried out and become as national as the lifeboat itself, great benefits would accrue. The men could not be braver, but they would go on their errands of mercy with lighter hearts, knowing that those dependent on them for their bread would be amply provided for. We cannot expect to see often such munificence as has been shown in the recent case; but by a system—partly compulsory, partly voluntary—every lifeboat man may provide for his wife and children without leaving them to the charity of the public. Nothing can be more reasonable than that the men in the service shall be insurable lives, and not only so, but insured as well.

HOSPITAL SATURDAY FUND.

THE delegates of the Hospital Saturday Fund for 1886 have seen their way to distribute £9750 out of about £11,000 realised up to a few days ago. The institutions to be benefited are seventy-five hospitals, thirty-nine dispensaries, and eighteen convalescent homes. The Board reserve 5 per cent. of the sum distributed for surgical appliances and other purposes. The chief awards to hospitals are:—Brompton Consumption, £589; London, £588; Victoria Park Chest Hospital, £288; Middlesex, £276 3*s.* 6*d.*; St. George's, £267 8*s.* 10*d.*; St. Mary's, £224 17*s.* 1*d.*; Metropolitan Convalescent Home, £211 0*s.* 5*d.*; Westminster, £208 0*s.* 1*d.*; King's College, £175 13*s.* 8*d.*; Royal London Ophthalmic, £174 2*s.* 7*d.*; North London, £176 12*s.* 1*d.*; Charing-cross £162 11*s.* 1*d.*; University College, £204 8*s.* 8*d.*; Royal Free, £168 5*s.* 8*d.*; Hospital for Sick Children, £129 0*s.* 2*d.*; German, £115 19*s.* 10*d.*; Royal National, £108 4*s.* 10*d.*; City-road (Chest), £96 1*s.* 9*d.*; North-West London, £81 1*s.* 10*d.*; St. John's, £82 7*s.* 6*d.*; Royal Orthopædic, £89 0*s.* 8*d.* The great efforts of the Board to increase this Fund must be recognised; but it is disappointing to notice that they have not been more successful. The sums distributed do not exceed those of last year by more than £250. A sum of under £10,000 is altogether disproportionate to the ability of the working classes of the metropolis and to their obligation to the hospitals, which exist chiefly for them. A committee has been appointed to take the necessary steps for registering this Fund under the Friendly Societies Act. It is thought—though there is some difference of opinion on this subject—that some advantages will be gained by this, especially in acquiring greater facilities for dealing with occasional defaulters. But what is seriously wanted is a better method of organisation to gather weekly and regular subscriptions to the Fund. The present condition of the hospitals ought to make the time favourable for such action.

THE MEAT-SUPPLY OF MARSEILLES.

AMONG many other causes that contribute towards the exceptional insalubrity of Marseilles must be noted the fraudulent sale of meat unfit for human consumption. This is a grievance which affects not only the inhabitants, but also the crews and passengers of the ships, many of them English ships, that take provisions on board at Marseilles. It appears that in the district of Aveyron, and notably at Saint Afrique, the principal industry is the making of the celebrated Roquefort cheese. For this purpose the sheep as well as the cows are valuable principally on account of their milk. It is to the interest of owners to kill both calves and lambs before the flesh is sufficiently formed to constitute wholesome food. But a calf will consume an amount of milk which, in the Aveyron district, is equal to three francs a day, while augmenting in meat value at the rate of only one franc per day. Thus a calf, which should be kept at least thirty days, would cost ninety francs, and yield an increased value of only thirty francs. With respect to lambs, the loss is in the same proportion. It has therefore been the practice to kill lambs and calves at once, and import the meat direct into Marseilles. After the ravages made by the cholera the Mayor decided to issue a special decree against this practice. Henceforth the head must not be detached from the carcase, so that the presence of the teeth may testify to the age of the lamb or calf. But the above was not the only grievance. A bullock brought into Marseilles

and killed at the municipal slaughter-house paid, in all, dues to the amount of thirty-two francs. If the same bullock were killed outside the town and the meat imported, the dues to be paid would amount to no less than a hundred francs. Yet, in spite of this prohibitory tariff, a great quantity of dead meat was brought into Marseilles. The fact is, the meat came from animals that had been killed while ill, or that had died before they could be killed. Taught by the epidemics the necessity of attending to such matters, the Mayor has also decreed that beef, mutton, and pork can only be brought into the town if the owner has first secured the certificate of a veterinary surgeon who shall have seen the animals before they were slaughtered. These new regulations have not long been in operation, and it is too soon to speak of the effect produced. Few persons, however, will be found to cavil at their severity; and, in this respect at least, we can venture to congratulate the local authorities. Unscrupulous meat merchants will find, we trust, their trade destroyed, and the municipality has done well to protect the population and strangers who visit the port from their nefarious practices.

REPORTED CURE FOR LEPROSY.

UNDER this heading the *St. James's Gazette* of Dec. 17th quotes a portion of a letter from Father Damian, of the Molokai Leper Settlement, to a German publication, in which he shortly refers to and extols the wonderful effects of a treatment carried out at the Kakaako Leper Hospital by by Dr. M. Goto of Japan, who was invited over by the king. The treatment referred to is similar to that long carried out by Dr. S. Goto, of the Kihai Hospital, Tokio, Japan. It is hygienic, dietetic, and medical. Strong patients are bathed thrice daily, and weaker ones twice daily, in warm fresh water at 90° to 100° F., into which has been placed an infusion of a few ounces of Hichiyou bark (*Æsculus turbinata*), together with certain proportions of Taifuushi, sulphur, and other ingredients. The patients are fed generously, but not excessively, thrice daily, on rice, milk, beef, mutton, chicken, eggs, good strong broth, boiled taro, vegetables, and fruit; but sour poi and also raw fish, when used with the usual native condiments, are forbidden. The medical treatment "varies according to the condition of the patient and the stage and character of the disease." The two chief medicines used are, in all cases, Seiketsu-ren as pills and in large doses (? the bark of the Hoang-nan tree with realgar and alum), and yoku-yaku for baths. Dr. Goto also employs tincture of the perchloride of iron, sulphate of quinine, iodide of potassium, vegetable tonics and bitters, and the carbonate of soda and potassium, especially the alkaline salts. Under this treatment he reports, under date of April 20th, 1886, five cases as "almost cured," nineteen as "improving," and seventeen as "relieved."

THE VACCINATION OF THE AUSTRO-HUNGARIAN ARMY.

STRUCK by the wonderful fact that in the German army the compulsory vaccination had reduced the mortality from small-pox to *nil*, the Crown Prince Rudolph of Austria had been led to urge a similar precaution for the Austro-Hungarian army, and within the last few months, the *Evening Standard* observes, every soldier has been compulsorily vaccinated. The result is that whereas in Pesth a small-pox epidemic of great severity has been raging among the civil population (who are under no compulsion), there has not been a single case among the numerous troops of the garrison at Pesth. Of course all this will be explained away by our anti-vaccination friends, and the many who have died of small-pox will be regarded as better off than those who have been saved by vaccination. But the majority of people will not go wrong over such plain facts.

THE NEW REICHSTAG BUILDING AT BERLIN.

AN account of the proposed ventilation of the new Reichstag at Berlin has recently been published by Mr. W. H. Tyler, who gives an interesting description of the efforts that are being made to ensure the ventilation of the Houses of Parliament being as perfect as possible. The Grand Hall is to be ventilated by air admitted through the roof and drawn out through the floor, the air being drawn from a height of 250 ft. to ensure its purity. It will be first conveyed into a large chamber, where it will be prepared for admission into the hall. The preparation will consist of exposing it in winter to hot pipes, a surface of 43,000 square feet being required for this purpose. The same pipes in summer will contain a liquid at nearly freezing-point, so that the temperature of the hall cannot during this season of the year become unduly high. Here also it will be dried or moistened as occasion may require, and by a simple arrangement of valves the necessary quantity will be admitted. The hall is to contain nearly 1000 persons, each of whom is to be provided with 1420 cubic feet of air per hour. When the House is sitting, the air will be constantly examined by four assistants, who will report on the thermometer, hygrometer, and anemometer indications, and thus enable the engineer to modify it whenever this is required. It is thus expected that the condition of the atmosphere of the houses will be maintained in proper condition.

PENURIOUS TREATMENT OF MEDICAL OFFICERS.

WE have frequently had occasion to refer to the paltry remuneration which is offered for medical services by many municipal and parochial bodies. At a recent meeting of the Darlington Town Council a fact was incidentally mentioned which affords a fresh example of this short-sighted economy. It appears that the three medical officers who attend the poor of this considerable town, numbering about 13,000, and who with curious assurance are required to supply medicines and appliances, receive each per annum for these attentions the utterly insignificant sum of £35. With every allowance made for hard times and for work among the poor which may be done by medical men in independent practice, the sum above mentioned is, we repeat, unjustifiably small in comparison with the duties exacted in return.

NEW FOREIGN MEDICAL JOURNALS.

A NEW French weekly medical journal commences with the new year. Its object is to assert the importance of provincial medical science and to assist in the decentralisation of French medicine, which it is considered is concentrated too much at Paris. The title is *La Province Médicale*, and it is published at Lyons.

The appearance is announced in Vienna of two new medical journals—*Klinische Zeit- und Streitfragen*, edited by Professor Schnitzler; and a weekly entitled *Internationale klinische Rundschau*, edited by Drs. Bela Weiss and A. Schnitzler.

A SURGEON FINED FOR CERTIFICATE OF STILL-BIRTH.

THE writing of certificates is one of the chief ways in which medical men come into contact with public offices and public law. It is a duty which they cannot discharge too carefully. We regret to see that a medical practitioner has been fined £5 and costs for signing a certificate of still-birth for a baby that had lived a few hours. The mother was attended in her confinement by a midwife, though for phthisis, of which she died in the evening, she had been seen before and after her labour by the medical man. The

child lived a few hours. Statements varied as to whether this had been made clear to the signer of the certificate. But the magistrates imposed the above fine. It is a great temptation to save poor people all the paraphernalia and expense of a funeral for a child that can scarcely be said to have lived. But it would have been better to have left the midwife to state the facts, and in any case the utmost care to be accurate is necessary.

THE CARRIAGE TAX.

THE movement to repeal, or at least modify, the tax on carriages is one that deserves success, if it were only for the pertinacity with which it has been, and still is, carried on in the face of unaccountable neglect and opposition. A great mistake is made by those who think this is a "rich man's question." The profession of medicine is in this way undoubtedly unduly taxed, but it is the coachbuilders' class that suffers most, and the tax is a burden on industry. It ought to be abolished, and the magnitude of the revenue derivable from the tax is not so stupendous as to be overwhelming to any spirited Chancellor of the Exchequer.

THE ACCURACY OF THE NEW MEDICAL REGISTER.

THE Registrar of the Medical Council is very anxious to secure the greatest possible accuracy in the new volume of the Medical Register. This can only be attained by the co-operation of the profession, and especially of all those who have changed their addresses or added to their titles. If such gentlemen will immediately intimate such changes they will be duly registered; otherwise inaccuracies will remain which not only discredit the Register, but may disqualify practitioners.

THE PROGRESS OF CHOLERA.

IT is stated that there has been no recurrence of cholera in the neighbourhood of Tirnova since the first report, when eight deaths occurred. The sanitary authorities are, however, still maintaining a quarantine round the infected locality; and since the Bulgarian authorities decline to admit that any cholera has occurred within their principality, Roumania has placed Bulgaria in quarantine.

CHONDROMA OF THE LIP.

IN the Transactions of the American Dermatological Association for 1886 Dr. A. R. Robinson reports a very rare case of chondroma of the right side of the upper lip of a man thirty-six years of age. This affection has been described by Pagot under the term "labial glandular tumours."

OVERHEAD TELEGRAPH AND TELEPHONE WIRES.

THE recent heavy snowstorm has emphasised the lesson of warning as regards overhead wires. Many have fallen, and great damage has been done; but probably some considerable loss of life will be required to bring the facts clearly before the Legislature and to rouse public indignation to the boiling point.

FOREIGN UNIVERSITY INTELLIGENCE.

Bern.—Dr. Demme has been appointed Professor in Ordinary of Pharmacology and Children's Diseases.

Bologna. — This University will celebrate its seven hundredth anniversary in the Spring.

Bonn.—Dr. Franz v. Leydig, Professor of Comparative Anatomy and Zoology, will retire in April.

Freiburg.—Dr. Baumgärtner, formerly Professor of Pathology and Director of the Medical Clinic, died at Baden-Baden on Dec. 11th.

St. Petersburg. — It is now announced that Professor Nasiloff is to take charge temporarily of the surgical clinic—not Dr. Beltsoff, as originally stated. The report that Professor E. Bergmann of Berlin had declined an invitation to St. Petersburg is confirmed.

BERI-BERI IN THE DUTCH INDIES.

IT is officially stated that during the year 1885, there were 5388 persons in the Atchin colony treated for beri-beri, of whom 235 died and 842 were incapacitated for duty Up to the present time no regulations seem to have had any effect on the ravages of this strange malady.

FROM the report of the examination made by Colonel Sir Francis Bolton of the water supplied by the several metropolitan water companies during the month of November, 1886, it appears that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies contained rather more organic matter than the previous month's samples, although the actual amount present was in every case small for the season of the year. The water taken from the Lea and distributed by the New River and East London Companies also contained only a very small proportion of organic matter. All the waters were clear and bright on delivery.

DR. RAYNER'S plea, in *The Times*, for the treatment of mental disease at general hospitals deserves the attention of the profession. It is precisely what we have urged upon the consideration of our readers for many years past; but the subject has so many aspects that it cannot be at present adequately discussed.

DR. ALFRED MEADOWS has been elected an honorary member of the Washington Obstetrical and Gynæcological Society.

MR. CHARLES A. BALLANCE, M.S. Lond., F.R.C.S., has been elected Surgical Registrar to St. Thomas's Hospital, in the place of Mr. G. H. Makins, F.R.C.S., resigned.

THE *Deutsche Medicinische Wochenschrift*, which has hitherto been published by G. Reimer of Berlin, will now be published in Leipsig by G. Thieme.

The Lancet Sanitary Commission.

THE SANITARY CONDITION OF ROCHESTER.

ENGLAND has recently had much cause for congratulation that she has escaped the terrors of a disease which has visited with calamitous results France, Italy, and Spain. She has been able to regard with equanimity the possible introduction of cases of cholera into her midst, and has witnessed, without feeling the necessity for interference with her trade, the epidemic prevalence of this malady in continental seaports with which she is in constant communication. For this security she has undoubtedly paid a price, but the money expended has not procured for her safety in regard to this disease alone, but has given her inhabitants prolongation of life, and has raised the standard of health in all parts where the teachings of sanitary science have been allowed to prevail. But this security is not shared alike in all parts of the kingdom: in some, local authorities have striven to guard to the fullest the health interests of

those who are dependent on them; in others, there has been less willingness to incur the expenditure which is necessary for this purpose, and, strangely enough, amongst those which have been less active in this direction are localities that are more immediately exposed to risk of infection from without than are some others.

There are probably no towns more exposed to risks of the sort we have indicated than those which are situated on the waterside between London and the mouth of the Thames. Gravesend is known to be a special defaulter in this respect, but it by no means stands alone; the report recently issued by the Local Government Board gives but too grave an account of sanitary negligence in other districts of that neighbourhood. We have therefore thought it well to discuss in these columns the sanitary condition of other waterside towns in Kent, and we have directed our attention, in the first instance, to the towns of Rochester and Strood, which are situated respectively on the right and left banks of the river Medway.

Rochester forms part of a sanitary district which includes not only the parishes of St. Nicholas, Rochester, Precinct Cathedral, St. Margaret, and Chatham (*intra*) on the one side of the Medway, but also the parishes of Strood and Frindsbury on the other side of the river. The sanitary district is not therefore coterminous with either the registration districts of Medway or North Aylesford, but includes a part of each. The total population of the district numbered at the last census 21,307 persons, that on the right bank of the river being 14,240 in 2582 inhabited houses. During the year 1885 the death-rate for the whole district was 18·5 per 1000 of population; but if the deaths occurring in public institutions receiving patients from other districts be excluded, the rate is reduced to 14·9 per 1000. During this year, of a total of nine deaths from diphtheria in the whole district eight occurred in the Medway division, and of four total deaths from enteric fever three occurred in the Medway division. Of these two diseases, therefore, the Medway or Rochester division, as distinct from the North Aylesford or Strood division, suffered out of all proportion to the extent of population.

Rochester and Strood have shared with other towns the benefits of an improved water-supply. Thirty years ago two companies began to give facilities to the inhabitants for procuring water from deep wells in the chalk. Until this time the townspeople had nothing but wells in connexion with each house for their supply. These wells, situated in many instances in close proximity to cesspools, readily became contaminated, and proved a fertile source of disease to the inhabitants. Gradually the majority of these wells have been abandoned, and at the present time some three-fourths of the houses in Rochester and nine-tenths of the houses in Strood derive their water from the public supply. In 1880 the waterworks supplying the latter town passed into the hands of the Corporation, who thereupon expended £11,000 in their extension, and provided a sufficient quantity of water both for Strood and Frindsbury, and for more than three years a large majority of the houses in these three towns have been on constant service. The attention of the medical officer of health, Dr. Sladen-Knight, and of the surveyor, Mr. Banks, is being directed to the remaining houses receiving their water from local wells; maps have been prepared, showing for each the relative positions of wells and cesspools and the distance between them, and efforts are being made to induce the inhabitants to have their houses connected with the mains of the waterworks. Thus, during the year 1885, 117 samples of water were examined by the former officer, and some 60 wells were closed.

But while the local authority deserve credit for their recognition of the necessity of an ample supply of wholesome water, they have failed to keep pace with other towns in providing proper means for the disposal and removal of excremental matter. Speaking generally, the whole of the sanitary district depends solely upon cesspools. These receptacles vary from ten feet and more in depth. They are, as a rule, bricked, but must nevertheless afford ample means for the pollution of the soil beneath the towns. The smaller cesspools are emptied every year, but the larger retain their filth for four or five years. The contents are removed at night in buckets, which in some instances have to be conveyed through the houses to enable them to be emptied into the cart. The sanitary authority exercise little or no control over the operation, the inhabitants making their own arrangements with a contractor, who charges from £1 to £5 for the business of emptying each cesspool, the charge being proportioned according to its size. The surface-water is removed by means of drains, which discharge into the river Medway, and are carried on the foreshore to a position between high and low water mark. In some instances the inhabitants have connected their cesspools with these drains, and thus the overflow passes on to the banks of the river. The unsatisfactory nature of these arrangements appears to be well understood, and recently a firm of engineers submitted to the sanitary authorities of Rochester, Chatham, and Gillingham a scheme for the combined sewerage of these towns. It was proposed that the sewage should be utilised, and that the effluent, after purification, should be discharged into the Medway, not far remote from Gillingham. But the estimated expenditure proved a stumbling-block. The greatest opposition came from Chatham and Gillingham, and in the end the scheme was abandoned.

(To be continued.)

Pharmacology and Therapeutics.

MENTHOL PLASTER.

THE menthol plaster recently introduced into England by Messrs. Burroughs, Wellcome, and Co. for the American National Plaster Company is a good preparation. The specimen submitted to our inspection has the agreeable odour of peppermint, and indicates its nature also by the action of the menthol vapour on the conjunctivæ. We gave a plaster of it to a patient who complained of pain below the left breast. She expressed herself as greatly relieved by the application, which appeared to be more agreeable and to have greater effect than the belladonna plaster which she had previously worn. The writer applied a strip of the plaster to his brow whilst suffering from an attack of megrim. The action of the menthol was decidedly refreshing; it did not cure the headache, but seemed to abate its intensity, and even rendered movement less distressing.

ACETANILIDE, OR ANTIFEBRINE.

M. R. Lépine has published in the *Lyon Médicale* an account of a number of observations he has made both on animals and on patients of the action of this drug. He finds that it is a very valuable "nervine" in doses of seven and a half grains, producing as great an effect on the lightning pains of patients suffering from locomotor ataxy as a drachm or so of antipyrin. Like the latter, it lowers the temperature in fevers, and is preferred to antipyrine by patients because it does not produce a condition of semi-intoxication, as antipyrine in large doses is apt to do.

BICARBONATE OF SODA IN TONSILLITIS.

The treatment of tonsillitis by frequent local applications of carbonate of soda, which has been practised and recommended by Dr. D. Juan Giné, has been put to a series of tests by another Spanish physician, Dr. D. Rovira y Oliver, who deduces from them the opinion that, though it is often beneficial in cases where the parenchyma of the tonsil is affected, it is of much less value than many other applications in cases which are merely superficial, and catarrhal.

QUILLAJA SAPONARIA AS AN EXPECTORANT.

Dr. Maslovski has used the root of quillaja saponaria, which was recommended by Kobert, as a substitute for senega in a number of different pulmonary affections, and finds that it is a valuable expectorant. It is, however contra-indicated where hæmoptysis is present.

BENZOIN RESIN IN ULCERS.

Dr. Woskresenski, writing in the *Russkaya Meditsina* on the use of benzoin resin as a popular remedy for ulcers, says that he has frequently employed an ointment of the strength of four drachms to the ounce spread on lint, and renewed twice a day, with excellent results.

RESORCIN IN CONDYLOMATA AND MUCOUS PATCHES.

Dr. Gachkovski mentions in a Russian medical journal that he has applied resorcin as a dusting powder to thirty-four cases of acute condylomata which he has met with in the last five years, with the most satisfactory results. In one case where there were no less than thirty condylomata

on the prepuce, one of them as large as a raspberry, a daily application of resorcin reduced them all in the course of a week. Mucous patches, too, were easily cured by resorcin, though the cure was not permanent, as recurrence always took place.

TREATMENT OF ERYSIPELAS.

For the treatment of erysipelas Dr. Archangelski has tried a number of applications, and finds that their comparative efficiency is represented by arranging them in the following order: (1) benzoic acid; (2) tincture of iodine and turpentine, as ointment; (3) sulphate of copper; (4) sulphate of iron; (5) oxide of zinc; (6) naphthalin; (7) solution of perchloride of mercury, 1 to 300; (8) chloride of zinc; (9) iodoform.

CASCARA PASTILS.

The liquid extract of cascara sagrada though a valuable is not a palatable drug. Mr. Martindale has prepared some pastils containing the liquid extract. These gelatinous morsels can be rapidly swallowed without effecting the sensation of taste in any noticeable degree. That the pastils possess purgative properties we know from personal experience.

FORMIC ACID A DISINFECTANT.

Formic acid, according to Dr. Voitoff, who has made a number of experiments on cultures of pyogenic micro-organisms, is a specific against their success, and so may be considered as an excellent disinfectant.

THE COLLEGE OF PHYSICIANS AND MEDICAL DEGREES.

THE adjourned debate upon Dr. Allchin's amendment to the report of the Committee of Delegates upon Medical Degrees took place at the Royal College of Physicians on Dec. 23rd, Sir W. Jenner, Bart., President, in the chair. There was a large attendance of Fellows.

Sir H. PITMAN spoke first, and passed in review the previous resolutions of the College upon the subject, which, judging from the debate, he feared had been lost sight of by some of the Fellows. In 1884, upon the motion of Dr. Wilson Fox, the College referred to the Medical Bill Committee to consider how far it was desirable that the College should obtain powers to confer the title of Doctor of Medicine upon its Licentiates. To this resolution there was no opposition, the only material change being a further reference for suggestion of any other means whereby the alleged grievance to medical students, so thoroughly educated and examined, might be remedied. That Committee reported that it was desirable that increased facilities should be afforded for obtaining the degree of M.D., and recommended that the two Colleges should immediately take steps, either in co-operation with an existing University or by independent action, to secure this end. An interval now elapsed pending the scheme for the conjunction of the Colleges and its sanction by the Medical Council; and, this done, a further remarkable and instructive portion of the history of the question occurred. This was the reception of a letter from the Royal College of Surgeons requesting the College of Physicians to nominate seven delegates (later increased to ten) to meet the same number from their College, in order to determine what steps, if any, could be taken to enable the two Colleges to obtain the legal right of granting the title of Doctor to persons who have passed the examinations of the Conjoint Board. It was scarcely possible that the College of Surgeons would have proposed this unless they had known that the College of Physicians had previously viewed the matter favourably. No question was raised as to the desirability of this step, and the report of the delegates was now before the College. He thought the Fellows could hardly have recollected this history, when they were asked to assent to an amendment which was so adverse to the spirit in which the College had been acting. Moreover, the College had some time ago received a most influential memorial urging the combination of the Colleges to form one Royal College of Medicine with power to grant degrees. It was for the advantage of the profession, and it would be to the honour of the College by being useful to the profession, that the candidates approved by them should have something more than a bare qualification to practise. At the same time they could not object to any possible opposition. Naturally opposition might be expected from the Universities, for those who possess power are loth to see it shared by others. When Durham University was established it was opposed by Cambridge and Oxford. He did not believe that such opposition would arise from any feeling of jealousy of the Colleges; but he could understand that the Universities would be unwilling to see any degree granted on conditions less honourable than those of other bodies. In this he himself concurred, holding that a degree should be a distinction as well as a title. That was the question they had to settle. A degree would have to be obtained somewhere or other, whether through a teaching university or through the Colleges; and if a university were independently started in London, the Colleges would stand in a peculiar position with regard to it. Sir W. Gull's suggestion was opportune, for if they instituted an additional examination as the basis of the degree, the opposition of the Universities would be disarmed; and no doubt such a step would benefit the public as well as the profession, by stamping men as fully qualified in clinical medicine and surgery. The College owed a duty to the profession, but if it had to abandon the scheme, let it abandon it altogether. The College could of course change its opinion, but it had already gone too far to retreat with honour, and if it deserted the profession now it would do an injustice, and bring discredit on itself. If the College sought the powers and failed, it would have done its best to remedy this acknowledged grievance. But why should it not succeed? Some thought it anomalous for Colleges to grant degrees, but they forgot that the University of Edinburgh was founded as a College, and existed as such for over a century; and, to come down to modern times, they had seen instituted in London by Royal Charter a College of Music, with power to confer degrees of Bachelor, Master, and Doctor of Music. If a College can be instituted by Charter, why not a Medical Faculty? As regards the teaching university, it must be remembered that all things develop by degrees. They would endeavour to get power for the two Colleges to grant degrees in medicine, and other faculties would in time crystallise around them. But if they held their hands, and waited until a complete university was established, they might very possibly be left outside altogether, and would lose their acknowledged position at the head of medical education; and if they failed to grasp the present opportunity, their claim to deal with the question would be gone for ever.

Dr. MATTHEWS DUNCAN, whilst agreeing with nearly all of Sir H. Pitman's remarks, still maintained that the essence of the question had not yet been touched. The report contained statements which were far from being confirmed. It spoke of the "schools associated with the Colleges," but was it sure of the co-operation of the schools and of their hospitals? How could a teaching university be instituted without teachers? The project evidently aimed at such a university but there was no word as to its constitution, who were to form its senators, or in what relation the College councils were to stand to it. All were agreed as to the grievance, and that the Colleges would be honourably engaged in trying to remedy it, but there the difficulties of the question arose. They had to distinguish between a university and a college, and he held that a College such as this was distinct from a university, and its functions would be swamped in the new body. The College would lose its established position, and become a rival of other Universities. No doubt it would have done a great work, but it would be work foreign to the duties of the College; it would create a new body and would involve its own ruin.

Dr. ORD congratulated Dr. Allchin on his speech, but maintained that, although himself greatly interested in the work of the Teaching University Association, he could not support the amendment, for he felt that the Colleges, if they prosecuted this matter earnestly, would be working in harmony with the objects of the Association. The power and influence of the Colleges would be of great value in effecting this quickly; and it was in the belief that a university organisation would thus be originated that he urged the rejection of an amendment the effect of which was to stop all progress.

Sir ANDREW CLARK did not think that perfect unanimity could be expected, but considered that in discussing the principle it was important not to anticipate the details of a scheme. He warned the College that if Dr Allchin's amend-

ment were adopted it would be bound to apply to a university, and be quite unable to act independently; its offers might be rejected or might only be accepted on terms humiliating to the College. That it was unreasonable for the Colleges to become a university was no argument against the course proposed, which was urged on not only by practitioners, or by London teachers, but by a reasonable demand on the part of London students. The argument that the scheme was "without precedent" was made in ignorance of the history of universities. Was any precedent ever required to found a university? and as to the Colleges not representing the teaching body, were they not constituted of teachers? Nor would it be an "inferior degree," for had not the whole action of the Colleges been one to raise and improve the standard of medical education? He was sure that such training, particularly in clinical work, would be advanced and improved by this scheme. Nor would this be gained at the cost of the autonomy of the College. The degree would be given in unison with the College of Surgeons, and each College would retain, as at present, its individuality. The question should be dealt with on the ground not of what is theoretically desirable, but on what is just and practicable. It could not detract from the dignity of the College. If an institution such as theirs did not progress, it would certainly decay. He maintained that the grievance they had to remedy was a just one, and that it was reasonable and natural that it should be remedied by those who were at the head of the profession. If the Colleges did not seek the powers by themselves, they might be supported by a third body constituted by the State and representative of the schools; or a third alternative would be that shadowed forth in the amendment—affiliation with a university. The College was in the midst of a crisis, and he felt that if they were to be loyal to their inheritance and hand down its traditions unimpaired, they must take the lead in this great movement.

Dr. STURGES asked for a definition of the phrase "Arts or Science" in the resolution, and was proceeding to criticise a previous report suggesting details of a proposed Arts examination, when it was pointed out that the College had not at present considered such details.

Dr. QUAIN contended that Dr. Allchin's amendment did not point out how the object they aimed at was to be secured. The College was bound to give a degree, and the details of the scheme could be referred for further consideration.

Sir RISDON BENNETT said his loyalty to the College and anxiety on its behalf prevented him accepting the resolution of the delegates. He thought that if the opportunity now before them of acquiring these powers were lost for ever, it would be to the advantage of the College; yet he quite admitted there was a grievance, and that it was the duty of the College to assist in getting rid of it. He could vote for the second resolution, which involved an application for powers to grant degrees, but could not concur in the details of the first resolution. He would consent to nothing which touched on the rights and privileges of the College, and he maintained that the first effect of creating a new class of graduates would be to break down the partition between the Licentiates and the Members, and would entirely alter the value of the Fellowship. How could this be done without converting the College into a new-fangled university, with the consequent loss of its prestige? Whatever is done, it must tend to raise the examinations, and would lead to the establishment of an inferior body, whilst doing away with one high-class examination. He felt that they were very imperfectly acquainted with the probable outcome of such a scheme.

Dr. DICKINSON said there was a great work before the College, and that if they obtained powers to confer a degree, it must be a worthy one, embracing a higher examination in Arts, a clinical examination, and a requirement that candidates should have had part of their education in London.

Dr. LATHAM had formerly opposed the project, but had been converted to it, and hoped that, for the advantage of the general public, of the medical students in London, of the Colleges of Physicians and Surgeons, and especially of the old Universities, it would be carried into effect. He believed that any opposition that might come from the old Universities would proceed from a sentimental grievance, and that they would hold their own ground. The graduates of the Universities were proud to become Fellows of the College; and was there any reason why that relationship should not be still maintained? Were not the two Colleges in a better position to judge of medical education than the small bodies of the Universities; and would they not seek to maintain the standard of medical learning; whilst they certainly could not lower the value of University degrees?

Dr. BARNES said that it was wrong to fear that the Colleges would suffer in reputation by taking this course. If they have a leading part in the project, how could they suffer degradation? They had gone too far to retire with any decency or safety. He held that medical education was superior in London, and the student life in London could be compared with the life at a University.

Sir W. GULL said it was the duty of the College to advance the profession of medicine, and to minister to its wants. If students are driven away from London for want of a degree, the Colleges should meet this. They had already accepted this, and had to consider on what terms such a degree should be given. He suggested the title of M.D. Lond. as one worthy of adoption, that of M.D. Univ. Lond. standing for the present University. The time had come for granting a degree on professional merits.

Dr. BROADBENT pointed out that the question was whether they were going to delegate this power to others or do it themselves. If the College decided not to take powers, according to the amendment, then the whole question would fall. If the decision were otherwise, then they must expect that all who now objected would co-operate to make the degrees worthy of the Colleges. To all intents and purposes, the Colleges at present exercised the functions of a medical university; so that the step proposed was merely a further development of their powers, the real revolution being when the College began to examine Licentiates. That action of the College had raised the whole tone of medical education. If the amendment were carried, another body would be called into existence, and the Colleges would sink into a secondary place.

Dr. PRIESTLEY had been much influenced by Sir H. Pitman's speech, and having no doubt that this would be the starting point of a new university, he should support the resolution.

The College then divided, and Dr. Allchin's amendment was rejected by a large majority, only nine Fellows voting in its favour.

Dr. BROADBENT moved, and Sir W. GULL seconded, the next resolution—viz., "That an application be made to the Crown by the Royal College of Physicians of London and the Royal College of Surgeons of England, acting conjointly, for power to confer degrees in medicine and surgery." This was unanimously acceded to, and a further motion referring the resolutions and Sir W. Gull's amendment to the Committee of Delegates was also carried, on the motion of Dr. Quain, seconded by Dr. Priestley.

DONATIONS AND LEGACIES TO MEDICAL CHARITIES IN 1886.

THE following is a list of the principal legacies and gifts during the past year to the various medical charities and institutions of Great Britain:—Mrs. Mary Anne Curwen (in default of her daughter having issue), £40,000 to St. George's Hospital, £5000 each to two and £2500 each to about twenty other London medical charities; Mr. Richard Henry Vade Walpole, over £185,000, in equal shares, to the Westminster Hospital, Charing-cross Hospital, King's College Hospital, St. Mary's Hospital, the London Hospital, the Royal Free Hospital, the London Fever Hospital, the City of London Hospital for Diseases of the Chest, the Norfolk and Norwich Hospital, the Cheltenham Hospital, the Great Yarmouth Hospital, and the British and Foreign Sailors' Home, Great Yarmouth; Mr. Henry Chisley of Hastings, £13,650 to the London Hospital; Alderman Thomas Rose, Manchester, £10,000 to the Manchester Royal Infirmary, £5000 to the Salford Hospital, £2000 to St. Mary's Hospital for Women, Manchester, and £1000 each to the local Eye, Lock, and Clinical Hospitals; Mr. James M'Ewan, £5000 each to the Glasgow Royal Infirmary and the Western Infirmary, Glasgow; Mr. Beardwood, £5000 to the Blackburn and East Lancashire Infirmary; Mr. Alfred Burges, Worthing, £3500 to such institutions or societies as his trustees shall think

fit; Miss Mary Elizabeth Tanner, £3000 to the Royal Hospital for Incurables, Putney, and £500 to the German Hospital, Dalston; Mr. Charles Johnson da Silva, such part of the residue of his personal property as may by law be applied for charitable purposes to the Royal Medical Benevolent College, to found three exhibitions of £50 per annum, each tenable for three years, for boys educated at the College and proceeding to the Universities, and to pay £20 per annum each to twenty-six poor pensioners of the said College; Mr. William de Hague, £3000 each to St. George's Hospital, the Middlesex Hospital, the London Hospital, the Hospital for Incurables at Putney, the Westminster Hospital, and the City of London Hospital for Diseases of the Chest; Mrs. Mary Gatley Litler, £1000 each to the National Hospital for the Paralysed and Epileptic, Queen's-square, Bloomsbury, and the Royal Hospital for Incurables at Putney, and £500 to the Warneford Hospital, Leamington; Harvey Kimpton Owen, M.D., F.R.C.S., £1800 to the Royal Medical Benevolent College at Epsom to found a scholarship, and £500 to the British Medical Benevolent Fund; Mr. William Augustus Guy, M.B., F.R.S., F.R.C.S., £250 each to King's College Hospital and King's College Hospital Convalescent Institution, and on the death of his wife, or twenty-one years after his decease, whichever happens first, one-half of a moiety of the residue of his real and personal estate which is left in trust for accumulation in the meantime to King's College Hospital Convalescent Institution; Mr. Samuel Taylor, £1050 to the Bedford General Infirmary; Mr. Thomas Phillip Danson, £1000 to the Endowment Fund of the Bootle Borough Hospital and £500 to the Liverpool dispensaries; Mr. Henry Boddington, £1000 to the Manchester Royal Infirmary and Dispensary; Mrs. Harriett Anne Richardson, £1000 to the Hospital of St. John of Jerusalem and St. Elizabeth, Ormond-street; Mr. Richard Towne, £1000 to the National Orthopædic Hospital; Mr. Joseph Stevens, £1000 to the Nottingham General Hospital and £500 to the Midlands Institution for the Blind, Nottingham; the Right. Hon. Katherine Anne Viscountess Cranley, one moiety of £1000 Consols to the Brompton Hospital for Consumption; Mr. Abraham Altham, £500 towards erecting a children's ward at the Victoria Hospital, Burnley, and £500 to the endowment fund of the said hospital; Mr. James Fletcher, £500 to the Northern Infirmary, Inverness; Mrs. Frances Acton, £500 to the Royal Hospital for Incurables, Putney; Dame Anna Maria Hare-Clarges, £500 each to the Putney Hospital for Incurables and the Taunton Hospital, Somersetshire; Mr. Foster Connor, £500 to the Belfast Royal Hospital; and Mr. Charles Charlesworth, £500 to the Bradford Fever Hospital. In respect to donations, Mr. Philip Horsman defrayed the cost (about £4000) of the in-patient department of the new Eye Infirmary at Wolverhampton; the Duke of Westminster contributed £1000 to the Hospital for Women, Soho-square; Miss Cooper of Southport, £500 to the endowment fund of the children's ward at the local hospital; and Mrs. Booth, £500 to the Manchester Clinical Hospital for Women and Children.

CHRISTMAS FESTIVITIES IN THE HOSPITALS.

Charing-cross Hospital.—The annual Christmas entertainment to the inmates of this hospital was given on the 17th ult., when the principal item in the performances was Mr. Maddison Morton's rather old-fashioned, but interesting little comic drama, "A Husband to Order," which was acted with care and judgment, and was received with the heartiest demonstrations of approval. An amateur orchestra of strings and pianoforte performed a selection of music during the evening, and in the interval between the performances the visitors made a tour of inspection through the wards of the institution.

Guy's Hospital.—In accordance with the annual custom, Mr. R. H. Lushington, the treasurer, and Dr. Steele, the medical superintendent of this institution, accompanied by a party of visitors, made a tour through the wards of the hospital at dinner-time on Christmas Day. The effect of the lack of funds at this institution was, to some extent, perceptible in an increased number of empty beds, and in the diminished display of evergreens in one or two of the wings of the hospital, but otherwise Christmas was as gaily kept up as in other years. The dinner, consisting of roast beef, turkey, plum pudding, and dessert, was served promptly at one o'clock, and apparently enjoyed by the inmates. In all the wards there were Christmas trees, and in the evening concerts were improvised in the wards in which the attendant noise could safely be permitted.

St. Thomas's Hospital.—The Christmas dinner at this hospital consisted of beef, weighing over 300 lb., and plum pudding, weighing 475 lb. The wards were all artistically and tastefully decorated with flags and evergreens. In the Victoria ward, solely occupied by children of tender age, were two large Christmas trees, the toys from which were distributed to the convalescent children on the 27th ult. In the evening carols were sung by the probationer nurses in all the wards with the exception of the Victoria, and the efforts of the staff to render their Christmas Day as enjoyable as possible seemed to be fully appreciated by the sick inmates of the institution.

Royal Free Hospital, Gray's-inn-road.—The various wards of this hospital presented a very pleasing appearance, the nurses and convalescent patients having decorated them with holly, evergreens, mottoes, and Scriptural texts. On the morning of Christmas Day the usual short service was held in each ward, and carols and hymns were sung. The patients were allowed to receive visitors at any time of the day and various extras were permitted. In the evening the convalescent patients, with their friends, had an entertainment in the Calthorpe ward, in which the medical staff and nurses took part.

Seamen's Hospital (late Dreadnought), Greenwich.—At this hospital a Christmas dinner, consisting of turkeys, pheasants, plum pudding, &c., was served to 202 patients. Of this number 126 were natives of Great Britain and Ireland, 20 were Norwegians, 12 Swedes, 12 Germans, 6 Fins, 4 Russians, 4 Frenchmen, and 4 natives of the West Indies, 5 citizens of the United States of America, 3 Danes, and 3 Portuguese, while Austria-Hungary, New Zealand, and St. Helena had each a representative. On the 28th ult. a conjuring entertainment and concert was given by the officers of the institution and their friends for the amusement of the nurses and servants, and on the 29th the same performance was repeated for the benefit of the patients.

The London Hospital.—At this hospital, which has room for nearly 900 beds, there were on Christmas Day 592 in-patients distributed over some fifty wards, the whole of which were decorated, and special fare was provided. The children were specially cared for in the way of toys, sweets, &c., and carol-singing was indulged in at intervals throughout the day.

North-Eastern Hospital for Children, Hackney-road; East London Hospital for Children; the *German Hospital;* and the *Hospital for Diseases of the Chest, Victoria-park.*—At all of these institutions there were the usual Christmas festivities and indulgence. The wards were decorated, special fare was provided, and toys distributed to the juvenile inmates.

University College Hospital.—The usual Christmas entertainment at this institution took place on the 29th ult., when the children were entertained by a Punch and Judy show, and the adults by a miscellaneous performance. Mr. Corney Grain, who kindly gave his services for the occasion, amused a large gathering of patients and visitors with a musical sketch, and Mr. Horace Chester gave a musical and mimetic entertainment entitled "Broad Grins." Later on a miscellaneous concert was held. The wards were effectively decorated with holly and evergreens, and all the children were presented with toys. Money has in addition been collected to enable welcome gifts of hats, boots, and clothing to be made to other patients.

Mr. Barnardo's Homes.—A Christmas dinner was given to all the inmates of the London branches of these homes, and afterwards sundry prizes for good conduct and diligence during the year were presented. In the evening a general Christmas entertainment was given, which met with evident and well-deserved appreciation.

THE MODE OF CAPITAL PUNISHMENT.—The New York Legislature at its recent session appointed a commission to investigate and report upon the most practical and humane method known to modern science of carrying into effect the sentence of death in capital cases. The present method of execution by hanging is for many reasons repulsive to the citizens of New York, and the report of the commission is awaited with considerable interest.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sunderland.—This borough is now estimated to contain nearly 125,300 people. The birth-rate of 37·7 per 1000 exhibits a decline; that of deaths, which was 23·7, shows a slight increase; and Mr. Harris, in an interesting study of the value of statistics as affecting Sunderland, urges that when correctly apprehended they indicate the need for further waging war against every circumstance that leads in any degree to interfere with the health of the community. Already a decrease in the infantile and in the diarrhœa mortality tends to show that results have been obtained from the improvements effected in the sanitary condition of the town, and householders are urged to second the efforts of the authority in the matter of disposing of vegetable and other house refuse by burning. With regard to the zymotic diseases, small-pox, diphtheria, and measles were the only three that during 1885 showed any excess over the average for the preceding ten years. The borough Act compelling the notification of infectious diseases, only came into operation in the latter half of the year. The cases of small-pox numbered 126, and of these 17 died. Of 98 vaccinated persons attacked 2, or 2·04 per cent. died; whereas of 17 unvaccinated persons 5, or 29·4 per cent., died. In 11 cases nothing could be seen or heard of vaccination, and of these 99·9 per cent. died. In only three cases did small-pox attack revaccinated persons, and in each case the revaccination was performed after the patients had contracted the poison of small-pox. Measles is known to have caused 1310 cases and 385 deaths; and it became an important question at one time whether the elementary schools should not be closed. But Mr. Harris felt that the evils of this course might, at the stage of the epidemic in question, exceed any good that could result, and in this view he was supported by the medical officer of the Local Government Board, to whom the facts were submitted. Diphtheria caused 12 deaths, but this only just exceeded the average. During the year 183 patients were removed to hospital, including 105 from small-pox and 46 from typhus. Unfortunately hospital isolation has for years past been greatly hindered in Sunderland, owing to the permanent retention of a temporary arrangement inaugurated under the influence of panic; but steps are now well forward for providing a hospital in every way creditable to the borough. Space prevents our doing more than giving a superficial summary of Mr. Harris's report, which is one of the most comprehensive and carefully prepared documents which have recently come under our notice.

Hull.—During 1885 the birth- and death-rates for this borough were 33·7 and 17·3 per 1000 living respectively, the population being 186,292. Both the general and the zymotic death-rates were exceptionally low, the latter only amounting to 1·06 per 1000, and the infant mortality was only 127 per 1000 registered births, as opposed to 155 for England and Wales as a whole. Of the zymotic deaths diarrhœa was the most fatal, 59 deaths resulting from it; but this was by no means a large number when contrasted with previous years. Great interest, however, attached to an attack of diarrhœa in the borough, which occurred during the exceptional month of March, 1885, and which was believed to have been associated with the pollution of the Hull water-service. Suddenly, on the 21st of the month, and "like a storm," diarrhœa manifested itself in Hull, and by April 5th, when the disease subsided, no less than from 18,000 to 20,000 persons had been attacked. The outbreak was peculiar in its special incidence on adults, but very few children in the affected areas were attacked. The characteristic symptoms were purging, vomiting, and pain in the bowels, attended with great prostration. But the mortality was trivial. The comparative absence of the disease amongst those of old age and in youth is regarded by Dr. Mason as pointing to the fact that the poison expended itself mainly on that portion of the intestines occupied by Peyer's patches. The cause of the outbreak is explained as having been due to the admission into the Hull water service, during certain operations at the works, of polluted and noxious matters from a beck and from Wood's drain; these receiving some of the drainage from the village of Willerby and the drainage from a farmstead. The disease, although in the first instance limited to houses supplied by the Hull water, or to persons using that water either in their own houses or elsewhere, subsequently indicated its contagiousness by spreading in the houses of persons who had drunk the water at their places of business and elsewhere than at home; but the question as to the origin of the infection is, unfortunately, dismissed in a few words, to the effect that there was possible contamination of the Hull water by admission into it of the excreta of persons suffering from diarrhœa just anterior to the epidemic. During the year 261 patients were admitted into the isolation hospitals. These are inefficient, and a ground plan is submitted in the report showing a new sanatorium which is in contemplation. The arrangement indicated appears to us defective, in so far as all persons entering the grounds must pass by the wash-house, one of the most infected of all hospital buildings, before reaching the administrative block, the approach to which should always be so arranged that persons passing to it will have no chance of communicating with those who deal with infected articles. There appears also to be, in connexion with the administrative building, which should be kept free from infection, a ward for probationers. This is a mistake, for probationers need as much isolation as those whose diseases have been fully recognised.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 4589 births and 3745 deaths were registered during the week ending Dec. 25th. The annual death-rate in these towns, which had been equal to 22·9 and 20·7 per 1000 in the preceding two weeks, rose again last week to 21·4. During the first twelve weeks of the current quarter the death-rate in these towns averaged 19·9 per 1000, and was 2·3 below the mean rate in the corresponding periods of the ten years 1876-85. The lowest rates in these towns last week were 11·7 in Brighton, 18·1 in Birmingham, 18·1 in Birkenhead, and 18·6 in Sheffield. The rates in the other towns ranged upwards to 29·4 in Manchester, 30·0 in Plymouth, 30·7 in Wolverhampton, and 31·9 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 424 and 386 in the preceding two weeks, rose again last week to 433; they included 182 from measles, 71 from scarlet fever, 75 from whooping-cough, 34 from "fever" (principally enteric), 31 from diphtheria, 40 from diarrhœa, and not one from small-pox. No death from any of these zymotic diseases was registered last week in Derby; whereas they caused the highest death-rates in Leeds, Halifax, and Wolverhampton. The greatest mortality from measles occurred in Cardiff, Leeds, Halifax, and Wolverhampton; from whooping-cough in Manchester, Bradford, Plymouth, and Huddersfield; from scarlet fever in Newcastle-upon-Tyne, Bristol, and Salford; and from "fever" in Preston. The 31 deaths from diphtheria in the twenty-eight towns included 17 in London, 3 in Portsmouth, 3 in Bristol, and 4 in Liverpool. No death from small-pox was registered in London and its outer ring, or in any of the twenty-seven large provincial towns. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The deaths referred to diseases of the respiratory organs in London, which had been 494 and 415 in the preceding two weeks, were last week 436, and were 93 below the corrected weekly average. The causes of 95, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol. The largest proportions of uncertified deaths were registered in Huddersfield, Brighton, Blackburn, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·0 and 22·5 per 1000 in the preceding two weeks, further rose to 26·2 in the week ending Dec. 25th; this rate was 4·7 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·5 and 18·0 in Leith and Perth, to 24·8 in Aberdeen and 32·2 in

Glasgow. The 648 deaths in the eight towns last week showed a further increase of 92 upon the numbers in the previous two weeks, and included 15 which were referred to whooping-cough, 13 to measles, 13 to scarlet fever, 11 to diarrhœa, 7 to diphtheria, 4 to "fever" (typhus, enteric, or simple), and not one to small-pox; in all 63 deaths resulted from these principal zymotic diseases, against 81, 63, and 75 in the preceding three weeks. These 63 deaths were equal to an annual rate of 2·4 per 1000, which was 0·1 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 15 and 19 in the previous two weeks, declined again last week to 15, of which 10 occurred in Glasgow and 4 in Aberdeen. The 13 deaths from measles (of which 12 were returned in Glasgow) showed a further increase upon recent weekly numbers. The fatal cases of scarlet fever, however, which had been 25, 17, and 16 in the previous three weeks, further declined last week to 13, and included 8 in Glasgow and 2 in Aberdeen. The 11 deaths attributed to diarrhœa, of which 5 occurred in Glasgow and 3 in Paisley, showed a further decline from recent weekly numbers. The 7 deaths from diphtheria, including 3 in Edinburgh and 2 in Glasgow, exceeded those in the previous week by 1; while the 4 referred to "fever," of which 2 occurred in Edinburgh, showed a decline of 7. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had increased in the preceding four weeks from 125 to 174, further rose last week to 188, and exceeded by 37 the number in the corresponding week of last year. The causes of 89, or more than 13 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 35·6 and 29·6 per 1000 in the preceding two weeks, further declined to 28·5 in the week ending Dec. 25th. During the first twelve weeks of the current quarter the death-rate in the city averaged 25·9; the mean rate during the same period did not exceed 18·4 in London and 19·1 in Edinburgh. The 193 deaths in Dublin last week showed a further decline of 7 from the high numbers in the previous two weeks, and included 6 which were referred to scarlet fever, 6 to whooping-cough, 5 to "fever" (typhus, enteric, or simple), 3 to diarrhœa, 1 to diphtheria, and not one either to small-pox or measles. Thus 21 deaths resulted from these principal zymotic diseases, against 23 and 22 in the previous two weeks; they were equal to an annual rate of 3·1 per 1000, the rates from the same diseases being but 2·1 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough and scarlet fever showed an increase upon the numbers in the previous week; whereas those referred to "fever" and diarrhœa had declined. Six inquest cases and 5 deaths from violence were registered; and 61, or nearly a third, of the deaths occurred in public institutions. The deaths of infants showed a considerable decline, while those of elderly persons exceeded those returned in the previous week. The causes of 31, or 16 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon-Major Sir Samuel Rowe, M.B., K.C.M.G., from the Seconded List, to be Surgeon-Major. This gentleman has also been granted retired pay, with the honorary rank of Brigade Surgeon.

RIFLE VOLUNTEERS.—3rd Volunteer Battalion, the Lancashire Fusiliers: Acting Surgeon Richard Crean, M.D., to be Surgeon.—1st Midlothian (Leith): Surgeon and Honorary Surgeon-Major James Struthers, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement.—4th Middlesex (West London): Surgeon and Honorary Surgeon-Major G. E. Norton resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement.—5th Lancashire (the Liverpool Rifle Volunteer Brigade): Acting Surgeon G. W. Steeves resigns his appointment.

VOLUNTEER MEDICAL STAFF CORPS.—London Division: Henry Work Dodd, Gent., to be Surgeon.

Correspondence.

"Audi alteram partem."

MR. SAVORY'S PAPER ON LIGATURE OF THE FEMORAL ARTERY.

To the Editors of THE LANCET.

SIRS,—I am indebted to Mr. Holmes for calling attention to the accidental omission of a few important words in the short abstract of my paper lately read before the Medical and Chirurgical Society, for which I alone am responsible. Instead of "the artery is pervious throughout," it should of course have been "the portion of the artery between the ligature and the sac is pervious throughout," &c. I can only hope that the omission was too obvious to mislead any one. The point is, I think, made clear enough in the paper itself. The title of this is, "On the Effect upon the Femoral Artery of its Ligature for the cure of Popliteal Aneurysm," and it opens thus: "When the femoral artery is tied at the apex of Scarpa's triangle for the cure of popliteal aneurysm, what effect is produced on the vessel *between the point of ligature and the sac?*" I say in my paper that I think the majority of surgeons will hardly be prepared for the conclusion which is to be drawn from the facts I report. It need not be said that I may be wrong in this; but I confess it is an impression I still retain. I cannot here of course refer at length to evidence of this; but when Mr. Holmes says it is stated in every text-book that the artery remains pervious from the ligature to the aneurysm, it may be enough if I answer him with a single passage from one of the most recent and important works on surgery. When the superficial femoral is tied in Scarpa's triangle for popliteal aneurysm, "the artery very often becomes occluded by coagulum from the ligature to the aneurysm, and beyond it to the first large branch below, while in other cases a certain portion of that length remains pervious. After a little time the aneurysm and the obliterated vessel undergo a process of contraction and absorption, so that they come to resemble a solid cord with a knot on it." In the discussion which followed, I meant to say, in the remarks to which Mr. Holmes refers, that I do not remember to have seen in any work the facts (as I find them) stated correctly. The passages in his own works, which Mr. Holmes quotes, would, it seems to me, hardly convey the idea that the portion of artery between the ligature and sac was, in the majority of cases, pervious throughout.—I am, Sirs, yours obediently,

Brook-street, W., Dec. 26th, 1886. W. S. SAVORY.

THE DENSITY OF THE TEETH AS INFLUENCED BY THE FOOD, ETC.

To the Editors of THE LANCET.

SIRS,—"Every dental surgeon knows that the hardness of the teeth may vary greatly in the same individuals at different periods; the most marked, although by no means the only cases, are those of pregnant women; and this cannot be explained solely on the ground that the secretions of the mouth are vitiated by reduced acid from gastric disturbance. There is undoubtedly an absolute softening of the whole tooth substance, due, probably, to the robbing of the teeth of the mother of their lime salts in order to build up the osseous system of the fœtus." This extract (apparently a quotation from the writings of Dr. Miller of Berlin) occurs in an annotation in THE LANCET of Dec. 18th. It is certainly not the case that every dental surgeon adopts these statements as true; and I venture to affirm it will be difficult to find one competent authority who will accept any or either of them. It is hardly possible to imagine the occurrence of degenerative or nutritive changes in a tissue like enamel—the tissue in which caries begins. To believe in such changes we must first conceive of some means by which this calcareous substance, as dense as quartz and devoid of cellular elements, could assimilate nutritive material when conveyed to it; and we must next imagine the conveyance of new and effete material to and from the vessels of the pulp, through the odontoblast layer of the pulp, and through the dentinal fibrils to its destination

in the enamel. The evidence is overwhelming that dental caries is due entirely to external agents; that enamel and dentine are perfectly passive under the process of disintegration; manifesting neither pathological action nor vital reaction of any kind. A dead tooth replaced in the mouth as an artificial substitute is just as liable to caries as its living neighbours; when it is attacked decay begins in those situations where it would be most liable to disease were it living, and the decay is true dental caries, identical in every way with the disease in living teeth. There exist three demonstrated predisposing causes of caries which enable us to understand clearly its common association with diseases and cachexiæ. Given, 1st, innate structural imperfections in the tissues—from which few sets of teeth are free,—varying infinitely in different individuals; 2ndly, crowding and irregularity of the teeth, equally varying in degree; and 3rdly, vitiation of the secretions of the mouth, not only varying in amount, but highly irregular in its appearance and duration through the life of different individuals—and the facts are fully accounted for without the invention of the questionable hypotheses which Dr. Miller has adopted. These hypotheses, which were held by early writers before the anatomy of the teeth was made out, have not been supported by investigators working in the light of modern science. They have, however, recently been revived by some few American writers. Some of these state that they have been enabled to demonstrate the presence of a distinct substance between the prisms of enamel, having stained the tissue with chloride of gold. On the strength of this they write of a "complete network of protoplasm extending from the pulp to the surface of the enamel." If such a substance do exist, it must be in a condition of extreme tenuity, and it is impossible to accept the gratuitous and unnecessary hypothesis that this trace of organic matter is a medium through which nutrition as well as gross degenerative changes are brought about in enamel.

I am, Sirs, your obedient servant,

Wimpole-street, Dec. 20th, 1886. HENRY SEWILL.

*** To open up our columns to a discussion on the causes of dental caries is not possible on account of want of space. It is a subject which is as yet by no means satisfactorily explained; but Mr. Sewill's theory that the teeth only play a passive part has very few supporters (*vide* a discussion at the Odontological Society some time ago). Experiments like those of Dr. Miller will doubtless clear up many points that are now difficult of explanation. In our annotation, tenth line, "vitiated by reduced acid from gastric disturbance" should read "vitiated or rendered acid by gastric disturbance."—ED. L.

THE RELATIONS OF MEDICAL PRACTITIONERS TO THEIR PATIENTS.

To the Editors of THE LANCET.

SIRS,—In your issue of December 25th, in an annotation on "The Lessons of the Campbell Case," you draw attention once again to the folly of practitioners making friends of patients (clients). Few of any experience in the working of general practices will be found ready to dispute this point. A well-nigh twenty years' personal experience, during the whole of which time I have been a keen observer of the ways of other practitioners, has demonstrated to me, over and over again, the wisdom of your strictures. The Campbell Case gives, of course, an extreme example of the complications which such friendships may lead a man into, but many, and many a time, have I seen good-paying patients lost to excellent practitioners over some trivial matter, which a strict professional bearing during the whole period of medical adviserships would have entirely obviated. At the same time, and this is what I wish to find out, how is a general practitioner (a provincial or country one at all events) to avoid the difficulty? He is truly between two stools—if he does not make friends (socially) his practice does not develop, and he is said to be a 'proud' man; if he does make friends, he very likely makes clients (patients) of them ultimately, but his very friendship, undoubtedly, puts him in constant danger of losing them. Many a tradesman's and farmer's family have I lost as patients because they became friendly with some neighbouring practitioner and his family. On the other hand, one's better class farmer clients are seldom or never attracted unless through a previous acquaintance of more or less friendly intimacy; and unless this is kept up, they will in nine cases out of ten discontinue to employ you. In these days of depression a farmer of fair middle class education, and *with money*, is a power in country districts, and he knows it, nor does he hesitate to exercise his adverse influence, if he feels aggrieved with his doctor, his parson, or his lawyer, politically, municipally, or ecclesiastically.

Finally, I do not write as a disappointed practitioner. I have a fair practice with good appointments, and I have made money at it. I may also state that I am a gentleman's (a widely-known man) son, and have had a liberal education in both general and professional subjects. I enclose my card.

I am, Sirs, yours truly,

Dec. 27th, 1886. GENERAL PRACTITIONER.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

THE NEW CHILDREN'S HOSPITAL IN NEWCASTLE.

AT a late meeting of the governors of the Children's Hospital, held in Newcastle last week, it was stated that the contract was ready to sign with the builder, and that all legal formalities were now complete. It was announced that the new buildings, apart from the land, would cost £15,000, all provided by the munificence of Mr. John Fleming, of this city. The plans which were exhibited, showed an entrance hall twenty feet square; close to which will be a committee-room, housekeeper's sitting-room, linen, and work room, and matron's room. These are to the right of the entrance hall, and to the left will be a waiting-room, porter's room, consulting room, drug stores, surgery, and medical officer's room, the last being provided in view of the possibility of a resident medical officer being appointed at some time or other. Facing the entrance hall will be a spacious dining-room, and beyond that will be rooms for the necessary domestic work. On the first floor, over the entrance hall, will be a day ward, and play room. To the right will be a small ward, a nurse's room, and a large general ward for girls, twenty of whom may be accommodated there. To the left will be a similar provision for boys. There will also be isolation wards, an operating room, and other necessary conveniences, while the second floor will be used as nurses' and servants' bedrooms. The front, which will have an imposing appearance, will be of red brick with stone dressings, and a belfry over the main doorway.

DEATH OF MR. ALFRED ROBSON BENSON, M.R.C.S., OF WHITBY.

I regret to announce the death, on the 9th of December, after a rather long illness, of Mr. A. R. Benson, M.R.C.S., of Whitby, Yorks, at the age of seventy-two. Mr. Benson held, for many years, an appointment in the Hudson Bay Company's Service at Fort York, Columbia River, Vancouver's Island. Whilst at Vancouver's Fort, Mr. Benson became intimate with the late General Grant, then a captain in the United States Army. He frequently made journeys into the interior amongst the Indians with whom he had much influence. Mr. Benson returned to England about twenty years ago, and settled in his native place, Whitby. He did not practise after his return, but was ever willing to advise the poor. He was known as an authority on local and genealogical history, being himself a member of one of the oldest families in Whitby. He was a genial and kind-hearted man, whose portly form and friendly greeting will be missed by many.

A NEWCASTLE DOCTOR IN BURMAH.

The special war correspondent of the *Allahabad Pioneer and Indian Mail* of the late date says, that after four days of hard marching, Yemethen was reached. The men were very much fatigued and pulled down by fever and sickness, and from exposure to rain; and, had it not been for the unremitting efforts of Surgeon Nichol, Medical Staff, 3rd Brigade, who always had his medicines ready to dispense hourly to a long line of patients who streamed in daily after a long march, our lines would have been sadly weakened. Dr. Nichol is intimately connected with Newcastle, and it will be a pleasure to his many friends to see this honourable mention of his name from the Indian newspaper.

POLICEMEN AS MEDICAL "EXPERTS."

Unless there is some change in the mode of conducting coroner's inquests, people will begin to ask what is their use; for instance, an inquest was held in Newcastle last week on the body of an itinerant dealer in medicine, or "Quack Doctor," who was found dead in his bed in his lodgings. A policeman deposed that he forced open the bedroom door, and found the body lying on a bed. On a chair he found a bottle (produced); and also a tumbler half full of water. The policeman further said that the bottle and glass had a similar smell—that of laudanum. Upon this very "conclusive" evidence as to poisoning, the jury returned a verdict to the effect that the deceased was found dead in his bed, but that the evidence was not sufficient to show whether death was due to natural causes, or to poisoning. The question naturally presenting itself in regard to this loose verdict is, why—if evidence was required only to show the cause of death—no medical man was called.

Newcastle-on-Tyne, Dec. 27th.

MANCHESTER.

(From our own Correspondent.)

VICTORIA UNIVERSITY.

THE financial condition of the Victoria University is at present by no means what it is desirable it should be, and it is therefore satisfactory to note that some of our citizens are not unmindful of its wants, as shown by the acquisition to its funds of £1000 under the will of the late Mr. Boddington. At the last meeting of the Leeds Town Council it was decided to support the application to the Government for an annual grant in aid of the University funds. Leeds will probably be the next place to become affiliated to the University. Much surprise has been expressed at the rumoured proposal to affiliate University College, London, to the Victoria University. No greater reflection than this can be made upon the present regulations in force at the London University, and it shows how keenly the want of facilities for London students to obtain a medical degree is felt at the present time. Amongst the external examiners appointed by the Council on Dec. 16th, one was from Scotland, one from Ireland, and one from London.

ROYAL INFIRMARY.

This institution also received £1000 under the above-mentioned will, and smaller legacies were left to many of the other hospitals, but amongst the numerous bequests and donations made to our various medical charities, the Ancoats Hospital, which is doing good and useful work in one of the poorest parts of Manchester, appears to be singularly overlooked. A little more prominence and "pushing to the front" on the part of those connected with this institution would probably remedy this apparent neglect. What appears to have been a case of hydrophobia from a cat's bite was recently admitted to the infirmary wards. The man was bitten some four months ago on the right hand by a cat; about a week before his admission he complained of much pain up the arm, and rapidly became worse, and was only brought to the infirmary a few hours before his death. It would have been more conclusive as to the real character of the disease had some corroborative evidence been obtained by experiment on one of the lower animals.

INFANT MORTALITY.

A deplorable loss of infant life appears to be going on. The coroner, when holding an inquest in Salford recently on the body of a child that had been overlain by its mother, said that within the previous week or so he had held inquests on about a dozen infants who had thus been found dead in bed.

Manchester, Dec. 30th, 1886.

THE JACOB TESTIMONIAL.—The executive committee met on Wednesday, Dec. 29th, Sir Wm. Stokes, President of the Royal College of Surgeons in Ireland, in the chair. Subscriptions amounting to over £90 were announced by the Honorary Treasurers, Professor Edward Hamilton, 120, Stephen's-green, and Dr. Thomas Purcell, 71, Harcourt-street, Dublin. The committee, having decided to immediately publish the list of subscribers, adjourned for a week.

EDINBURGH.

(From our own Correspondent.)

ROYAL SOCIETY OF EDINBURGH.

AT the ordinary meeting held last week, Sir William Thomson, the newly-elected President, took his seat. He subsequently made two communications to the Society upon wave motion, producing formulæ which express the relation of the velocity of propagation to the wave-length in cases where a stone is thrown into still water; and a calculation of the total disturbance, and its component elements, in the case of a ship gliding through a perfectly smooth tract of water.

UNIVERSITY LIBRARIANSHIP.

The Senatus Academicus of the University have made an appointment fraught with most important issues as regards its general status as a centre of learning. Through the death of the late Dr. John Small, the custodianship of the 200,000 volumes, constituting the library, had become vacant, and the Senatus have made a very good use of their patronage in appointing Mr. Hugh A. Webster to the office. There were over seventy applicants for the post. Mr. Webster is a graduate of Edinburgh, and has a wide knowledge of books and of general literature. For twelve years he has worked on the staff of the "Encyclopædia Britannica," and has contributed articles on very varied subjects of general interest to that publication—amongst them articles upon Epigrams, Antiquities, Hamlet, the Indian Archipelago, Mermaids, and Fortunatus. He has also contributed geological, botanical, zoological, ethnographical, and statistical accounts of various geographical areas to the same work, which are of high merit. His thorough knowledge of modern languages is also of great importance, since it will enable him to supply the marked deficiencies of the library in modern treatises and periodicals, especially in the departments of natural science and medicine. In addition to acquiring new treatises his duties in regard to those already collected will not be slight, since there is at present no complete catalogue of the library available for the general public, a state of things which exists in no other collection of equal importance in Europe. If Mr. Webster succeeds, as he doubtless will, in rectifying this deficiency, he will confer a lasting benefit on his *alma mater*, and will greatly lighten the task of those who seek knowledge in the volumes of her rich though pathless collection.

DRINKING FOUNTAINS FOR STUDENTS.

An elaborate drinking-fountain for the use of students was recently erected in the upper quadrangle of the New University Buildings, the gift of Mr. John Hope, of Edinburgh; and following closely upon this presentation another fountain has been added to the attractions of the Quadrangle at the College Buildings in South Bridge-street. The latter is the gift of Dr. W. F. Cumming. It was publicly inaugurated by the Principal, Sir William Muir, and the members of the Senatus, last week, in the presence of a numerous gathering, amongst whom were Dr. Cumming, the donor, Mr. Sydney Mitchell, the well-known Scottish architect, who furnished the design, and his father, Dr. Arthur Mitchell, C.B.

STUDENTS AND PROFESSIONAL EXAMINATIONS.

At a recent meeting of the Students' Representative Council, the subjects of professional examinations in medicine, and the compulsory attendance of certain lectures were under discussion. The outcome of their deliberations were a series of resolutions, which were respectfully submitted to the University Court, in favour of permitting medical students to enter for the first part (anatomy and physiology) of the second professional, or intermediate, examination at the end of the second year of study, instead of at the end of the third, as now obtains. The Council also prays the Court not to sanction any further addition to the number of compulsory courses in the medical curriculum, while its conditions are as they are. Both these requests are justified by the present state of medical study in the University, where course after course of lectures or demonstrations has been added to the list of classes, attendance upon which is compulsory, without any corresponding

extension of the curriculum in respect to time. The consequence of this is overpressure in the case of very many of the students, and a sense of oppression in those who are not actually overworked, which it would be well if the authorities could see their way to mitigate in the way requested, or in other ways which might suggest themselves.

ROYAL HOSPITAL FOR SICK CHILDREN.

The Directors of the Royal Hospital for Sick Children have appointed Dr. Melville Dunlop to the post of extra-physician upon the staff of the hospital, vacant through the resignation of Dr. Hodsdon.

Edinburgh, Dec. 28th, 1886.

ABERDEEN.

(From our own Correspondent.)

ROYAL INFIRMARY.

THE quarterly court of the managers of the Royal Infirmary was held on Monday, Dec. 13th, when it was resolved, on the motion of the president, Lord Provost Henderson, to make an appeal to the public for the funds necessary to carry out the proposed improvement and extension of the infirmary buildings. It was left to the committee of management to select a large committee thoroughly representative of town and country, who would take the matter in hand, and it was hoped that an endeavour would be made to have the sum, £24,000, subscribed before June 20th, 1887. There is little doubt as to the success of this scheme of the Lord Provost to celebrate the Queen's jubilee. He himself has subscribed £1000, and a subscription of £500 has also been intimated. Two vacancies in the medical staff had to be filled up at this meeting, and a large number of managers attended to bestow their patronage. For the office of ophthalmic surgeon, rendered vacant by the lamented death of Dr. Dyce Davidson, Dr. MacKenzie Davidson was the only candidate, and he was appointed unanimously. When Dr. Blaikie Smith was appointed assistant physician he resigned the office of chloroformist, which he had held for eleven years, and Drs. Booth, MacGregor, and Ruxton were candidates for the appointment. The first vote gave the following result: Dr. Booth, 83; Dr. MacGregor, 78; Dr. Ruxton, 16. A second vote was then taken as between Dr. Booth and Dr. MacGregor, when the former was elected by a majority of four votes.

THE UNIVERSITY COURT.

A meeting of the Aberdeen University Court was held on Saturday, Dec. 18th, when there was laid before the meeting a communication from the Senatus, stating that at a meeting held on the 11th, the Senatus resolved to represent to the Court their desire to withdraw the proposals as to changes in the examinations in medicine. The court granted consent, and this, for the present at any rate, gets rid of the difficulties raised by Prof. Struthers' dissent and Prof. Ogston's threatened action.

THE TRAINING OF PROBATIONER NURSES.

Two or three months ago the late Dr. Dyce Davidson and Dr. Garden were appointed a subcommittee of the medical committee to make inquiries as to the training of probationers in other hospitals, and as a result of their inquiries they submitted a report upon the subject, and their suggestions have so far been acted upon. The report says that probationers ought to be engaged for two years, during which time they ought to receive a regular course of instruction both theoretical and practical. The theoretical part of their instruction is to consist of lectures, which are to be divided into three courses: first, a series of lectures by the lady superintendent on nursing, the economy of the sick-room, instructions as to the preparation of food for the sick, &c.; second, lectures by one of the surgical staff on elementary anatomy, with lessons on surgical nursing, including bandaging, description and preparation of instruments, dressings, &c.; third, a course of instruction by one of the medical staff on elementary physiology and medical nursing. The practical or ward training is to be given by the ward sisters, supervised by the lady superintendent and the teachers who supply the theoretical teaching. Drs. Fraser and Garden have been appointed with Miss Lumsden to give the different lectures.

THE HEALTH OF THE CITY.

In October there was a decided decrease in the number of cases of scarlet fever, but it has again begun to spread, and the report for last month shows a large increase. In October 78 cases of scarlet fever were reported, but during November there were 107. In the later month there were also 14 cases of typhoid fever, as against 4 cases in October. The death-rate for October was 17·28 per 1000, but last month it mounted up to 23·22 per 1000. Whooping-cough and measles are also prevalent, and many cases have proved fatal.

Dec., 1886.

IRELAND.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

A MEETING of Convocation takes place on Dec. 30th, and consequently will be held too late for me to record this week the result of the election for a Member of the Senate. One of the candidates (Major Fitzgerald) has withdrawn, and the contest will lie between Professor O'Sullivan, Mr. O'Connor, and Dr. McMordie. I have already given my opinion that the first-named gentleman will probably be elected, and therefore shall not refer further to this subject. At the meeting this week, several notices of motion have been given, the principal being as follows:—Dr. Knight will move that the Senate be requested to consider what precautions can be taken to ensure that only the votes of members of Convocation are recorded in senatorial elections. Dr. Thompson will move a resolution requiring that at elections of a Senator by Convocation each voter shall affix his name to his voting paper in presence of a justice of the peace or a clergyman, who also shall sign his name as witness. The recent rules adopted by the Senate for the medical curriculum of the University have created considerable dissatisfaction, and it is gratifying to learn that Professor Pye has a notice relative to this matter, in which he will call attention to it, and move, that in the opinion of Convocation it should be repealed, and rules framed for the guidance of medical students in accordance with the direction of the General Medical Council be adopted. The proceedings are expected to prove very animated, and it is to be hoped that the Chairman will exercise the powers entrusted to him in repressing all unseemly attempts at disturbance.

THE EPIDEMIC OF ENTERIC FEVER IN CORK.

The Public Health Committee will this week have under their consideration a very important report, prepared by an inspector of the Local Government Board (Dr. O'Farrell), which deals with the present sanitary condition of the city of Cork. Additional interest must be attached to the communication in view of the epidemic of enteric fever which has prevailed for some time past. Cork is supplied with water from the river Lee, taken about a mile above the city. A filtering tunnel has been erected, but sufficient precautions are not adopted to prevent contamination from the houses and towns and villages situated on the banks of the river from its source to the point of intake at the water-works. The physical features of the site on which Cork is built render it extremely difficult to drain the hills, causing steps and abrupt gradients, while the flat of the city is below high water of spring tides. The rubble sewers in the older parts of Cork are defective in every respect—rat-eaten and blocked, so that they are no better than elongated cesspools, saturating the porous alluvial soil, which surround them with organic matter, and throwing back foul sewer air on the higher levels, thus producing zymotic diseases in those parts of the city which ought to be most healthy. There are about 1700 tenement houses in Cork, and many of them, especially in the centre of the city, are old and structurally bad. The public cleansing of the streets is carried out in a most unsatisfactory manner; this is partly due to the want of funds, the soft character of the limestone used for repairing roads, and to the large rainfall. The want of a public abattoir and the condition of the private slaughter yards must exercise an injurious influence on the health of the citizens. Dr. Donovan, the medical officer of health, is inclined to attribute the prevalence of typhoid fever to the cleansing of old drains and the dispersion of their contents over the surface of the public park and other places of public resort. Dr. O'Farrell

thinks these views very probably to be correct, and that the present outbreak is due to the faulty condition of the sewers and to the effluvia arising from them and from a soil saturated with organic matter and specific germs, acting at a time when in many parts of the United Kingdom there would seem to be an "epidemic tendency" to the development of enteric fever. These are the chief points referred to in Dr. O'Farrell's report, and in addition he makes the following suggestions for the consideration of the Public Health Committee:—1. That street cleansing be improved, and that a complete system of domestic scavenging be undertaken by the Corporation. 2. That the sewers of the city be completed and modernised, and that a map of the city be provided, in accordance with the 23rd section of the Public Health Act. That all main sewers be ventilated at their highest levels, and that they be provided with side entrances, manholes, and not less than twenty ventilators for each mile of sewer. 3. That lodging-house and tenement yards and premises be kept in proper sanitary condition, and that the bye-laws made under the 41st, 91st, and 100th sections of the Public Health Act be strictly enforced. 4. That a public abattoir be erected on a suitable site, such as the old Passage Railway, with proper appliances for drainage, ventilation, and cleanliness. 5. That the sewage matter removed from drains and deposited in the Park, and elsewhere, be thoroughly disinfected; and, in future, that all scavenged materials be immediately removed from the city by water carriage, or else that they be deposited and disinfected in suitably placed and properly constructed manure depôts. 6. That the water-supply of the city be protected, as far as possible, from contamination by the means already suggested in this report. 7. That the Medical Superintendent Officer of Health should devote his whole time to the duties of his office.

Dublin, Dec. 27th, 1886.

PARIS.

(From our own Correspondent.)

EXPERIMENTS WITH THE VIRUS OF RABIES.

THE most important news of the week comes to us from Vienna in the account of Professor von Frich's experiments with the virus of rabies supplied to him for that purpose by Monsieur Pasteur. M. von Frich finds: 1. That in animals which have died from rabies the virus exists in its most concentrated form in the central nervous system. 2. That small quantities of the cerebro-spinal substance of animals which have died from rabies injected under the dura mater by trephining are sure to be followed after a latent period of from fourteen to twenty-one days by the same disease, and this may be transmitted from these to other animals. 3. That the same disease, with the same symptoms and the same period of incubation, may be induced by intra-cranial inoculation with particles of medulla from human beings who have died of rabies, showing the identity in man and in the lower animals. 4. That infection is less sure by the subcutaneous method, and the period of incubation longer than with intra-cranial inoculation. 5. The length of the period of incubation depends upon the quantity of virus injected under the skin; the less the virus, the longer the incubation. 6. By the continuous intra-cranial transmission of the virus taken from the cerebro-spinal substance of rabbits, after a series of generations the period of incubation is shortened and its invasion is irregular. Later on the incubation still decreases, but the invasion becomes regular. 7. The *fixed virus* of an incubation period of seven days, which M. Pasteur obtains by inoculation from rabbit to rabbit through forty or fifty generations exceeds in intensity the virus of *street rabies*, not only in that the invasion of the disease is earlier, but also because the animals die without exception as well after subcutaneous injection as with inoculation of the dura mater. 8. The fixed virus does not seem to acquire by further transmissions any noteworthy shortening of its period of incubation. Sometimes the disease begins after six days; but, on the other hand, it may extend to eight, ten, or even twelve days. An incubation period of from eight to twelve days, and consequently a virulence of the same intensity as that of the fixed virus, may also be obtained by the transmission of street rabies, and this sometimes at the second or third generation. 9. M. Pasteur's method of obtaining a fixed virus of seven days' incubation is, perhaps, not the only one, for the said virus may sometimes be obtained much earlier, independently of the transmissions, and this virus is constant in its effects and in its period of incubation. 10. The virulence of particles of medulla diminishes daily under desiccation at 20° Centigrade over caustic potash, and is entirely destroyed after from fourteen to sixteen days. 11. Animals which have been subjected to hypodermic injections of a series of virus attenuated by desiccation become refractory to the stronger virus by the previous inoculations with the weaker virus if the stronger virus have not been used in too rapid succession. 12. Animals which have been inoculated hypodermically during ten days with virus of progressive virulence (medulla from ten days to one day) have not been refractory to infection with the fresh virus of street rabies, and have only exceptionally escaped after intra-cranial infection. 13. Rabbits and dogs inoculated by trephining with the virus of street rabies of sixteen days' incubation have always succumbed, notwithstanding the preventive treatment already described. 14. M. Pasteur attributed to the method of slow vaccinations the unsatisfactory results obtained previously by M. von Frich, and recommended a more intensive mode of treatment. The experiments carried out conformably to M. Pasteur's instructions have given no more favourable result; all the animals died of rabies. 15. The experiments have demonstrated a most important fact—that is, that in the rapid process the weaker preservative medullæ do not confer the same certainty of immunity from the effects of inoculation with the stronger medullæ. Of a series of dogs and rabbits inoculated as a control-experiment to that described in the preceding paragraph, and in which the rapid process was carried out without previous infection, most of the animals died of rabies. 16. Most of the animals which were submitted to the preventive treatment after subcutaneous inoculation with street rabies, died of the disease even when the period of incubation was thirty-four days. These experiments show, says M. von Frich, that Pasteur's method of rendering animals refractory to rabies is not yet either sure or certain. There is not yet a sufficient scientific basis for the application in man of a preventive treatment after the bite of a rabid animal. It is, moreover, quite possible that the preventive treatment, at any rate the intensive method recently recommended by M. Pasteur, may itself transmit the disease.

A PATHOGNOMONIC SIGN OF CANCER OF THE STOMACH.

A patient was shown at the last meeting of the Société Médicale des Hôpitaux who exemplifies the condition said by German writers to be characteristic of cancer of the stomach, a condition found by M. Debove to be constant in such cases, and which he proposes as a pathognomonic sign of the disease. In malignant disease of the stomach it will be found that hydrochloric acid is always wanting, whereas it lasts constantly during digestion in every other case. In M. Debove's patient this absence of hydrochloric acid enabled a diagnosis to be made at a period when there was no other symptom of cancer, and the disease was looked upon as dyspepsia, an opinion shared by M. Debove himself until he had ascertained the composition of the gastric juice. Since the beginning of the year the man has been under observation, and the real nature of his disease now constituted by a characteristic tumour the size of an egg, is no longer doubtful. In reply to questions M. Debove said that he obtained the liquid for examination by means of the œsophageal tube, and that the test used for distinguishing the acids were those recommended by the Germans. A solution of gentian violet (1 in 5000) gives a blue coloration with HCl. "l'orange Poirier" in saturated solution gives a red reaction with the same acid. Lactic acid is recognised by the increased yellowing of perchloride of iron, and by change in colour of a mixture of perchloride of iron and carbolic acid, from amethyst blue to yellow.

TREATMENT OF EPILEPSY.

M. Dujardin-Beaumetz is using antifebrine extensively in the treatment of epilepsy. As far as I know nothing has as yet been published on the subject, but I am told that in antifebrine we possess one of the most powerful "moderators" of the spinal centres.

Paris, Dec. 29th, 1886.

THE CLIMATE OF HYÈRES.

(From our Special Correspondent.)

AMONG the health-resorts of the Riviera, Hyères holds its own for its climatic advantages. While Cannes was but a miserable fishing village, and Mentone and Nice almost unknown, French doctors sent their patients to Hyères, and it was the first town on the Riviera where experiments were made in the climatic treatment of disease. It has the double advantage of being more to the south that any of the other towns on this line, and yet it is the nearest to London and Paris. Dr. W. P. Biden, the resident English physician, has favoured us with the meteorological observations he has made during the last six winters. His Sheringdon screen or box is well exposed to the north in the garden of the Hôtel des Isles d'Or. There are no plants near to afford shelter, and having visited the spot I can testify that the observations are taken in the fairest possible manner. The record of the results acquired will be seen in Table I. The climatic advantages, as demonstrated by these statistics, are further set forth by a comparison with other health-resorts. (See Table II.) The statistics in this table are open to question so far as the San Remo record of the number of days on which rain fell is concerned. As the amount of rain which fell was in excess of the other Riviera stations, probably those days when the showers were very slight were not included in the calculation. It will be seen that Hyères is at once warmer and yet colder than the other Riviera resorts mentioned. This implies that greater care must be taken at night, and then the invalid will derive all the profit of the higher day temperature and the higher mean temperature. For all practical purposes this is just the advantage required. In conclusion, it may incidentally be mentioned, that the great storms of Dec. 8th and 9th had altogether lost their fury when they reached Hyères. The weather has, on the whole, remained fine throughout this trying period.

December 11th.

TABLE I.—*Six Months of the Winter Season at Hyères during the Years 1879 to 1885.*

	November.	December.	January.	February.	March.	April.	Means.
Mean daily temperature of the six years	53·6°	49·0°	47·3°	50·5°	52·5°	56·0°	51·4°
Average maximum temperature of the day ...	61·7°	56·8°	55·0°	58·2°	61·5°	64·6°	59·6°
Average daily minimum temperature	45·4°	40·1°	39·5°	42·8°	43·4°	47·6°	43·2°
Average relative humidity (saturation = 100) ...	72·0	72·0	78·0	77·0	73·0	71·0	74·0
							Mean per six winter months.
Days of sunshine	22·0	22·5	20·6	19·3	25·6	22·8	134·8
Days on which rain fell	4·2	4·5	7·0	7·83	5·43	8·0	36·96
Days of calm	16·8	20·0	19·6	13·6	14·6	13·2	97·8
Days of light wind	10·0	6·3	9·0	11·16	13·8	14·4	64·66
Days of strong wind	3·2	4·5	2·4	3·8	2·28	2·4	18·58
Rainfall in inches	2·02	2·22	3·41	1·48	2·13	3·10	14·96

TABLE II.—*Climatic Advantages of Hyères as compared with other Health-resorts.*

	Hyères.	Cannes.	Nice.	Mentone.	San Remo.	Pau.	Greenwich.
Mean daily temperature in the shade	51·4°	50·8°	50·9°	51·5°	51·3°	45·7°	41·8°
Mean of daily maximum shade temperature	59·6°	56·7°	—	58·2°	—	55·63°	—
Mean of daily minimum shade temperature	43·8°	44·9°	—	45·9°	—	39·17°	—
Mean relative humidity	74·0	73·0	—	72·8	68·0	—	—
Total days of sunshine	135·0	117·0	97·0	—	108·0	—	12·0
Total days on which rain fell	37·0	45·6	36·2	47·0	26·0	69·0	90·0
Total days without any wind	97·0	48·0	—	—	—	—	—
Total days with slight wind	66·0	88·0	—	—	—	—	—
Total days with strong wind	17·0	41·8	—	—	—	—	—
Rainfall in inches	14·61	20·3	19·45	16·87	21·0	26·87	19·63

Obituary.

ALFRED WILTSHIRE M.D., F.R.C.P.

THE loss sustained by the early death of Dr. Wiltshire—a loss scarcely less felt in the world of science than by his friends and family—cannot be passed by without record.

Alfred Wiltshire was a native of Gloucester. Members of his family had been yeomen in that county and in Worcestershire. He received his early education at a private school. His medical studies were pursued at University College in London. The *res angusta* perhaps frustrated his desire to graduate at the University of London. The loss of so earnest and capable a member is but one of many examples of the injury suffered by the London schools through the narrow and exclusive policy of this University. Like many other men distinguished as successful students, he found it desirable to seek superfluous attestation of the theoretical knowledge and clinical skill acquired in London by going to Scotland for a university degree. He was enrolled M.D. at St. Andrews in 1862.

In the following year he passed the more real, but less honorific, examination for the licence of the Royal College of Physicians. Thus equipped, he started in the north of London as a general practitioner, fought bravely the battle of life, urged by the consciousness of being fitted for a higher position, and resolute to achieve it. His first step upwards was made when he was appointed a medical inspector of the Privy Council. This position helped him materially on the road towards the goal to which his ambition pointed. In it he did good work in the cause of vaccination. He next took the bold step of entering in the competition for consulting practice. So he took the Membership of the Royal College of Physicians in 1868, and when he had made his mark he was elected a Fellow in 1878. Fairly launched on his new career, and working hard in scientific pursuits, he was made treasurer of the Medical Society. He rendered valuable service in the administration and reorganisation of that Society, and was appointed to give the Lettsomian Lectures in 1877.

The bent given to his studies by his opportunities, rather than perhaps by his inclination, led him to cultivate obstetrics more especially. But he was accomplished as a general physician, and became distinguished as a surgeon. He joined the Obstetrical Society in 1866, was made librarian in 1871, secretary in 1874, and vice-president in 1877. He contributed five papers to the Transactions of this Society, all marked by the qualities of keen observation, earnest study, and judicious deduction. Amongst the most valuable of these is the memoir on "Tetanus after Abortion," written in 1872. Amongst less formal communications two are more especially interesting. In vol. xx. for 1878, Dr. Wiltshire referred in discussion to the "normal asymmetry" of the

child's head at birth, and to the blue colour of the eyes as a constant condition. He had originally described this phenomenon in THE LANCET in 1871. He said that, from information received from physicians practising amongst negroes, every black child was born with blue eyes.

Diagnostic skill and surgical enterprise have seldom been more strikingly exhibited than in an operation which made him famous amongst ovariotomists. In the nineteenth volume of the "Transactions of the Pathological Society, 1868," is recorded the history of a case of "A large multilocular ovarian cyst removed by operation from a patient with acute peritonitis." His merit in the initiation of this practice of looking upon collapse and peritonitis from bursting or other injury of the tumour as a reason for prompt action rather than for regarding the case as beyond hope, has received just recognition from Olshausen in his work on "Diseases of the Ovaries." This distinguished authority says: "Wiltshire appears to have been the first who had the courage to operate during collapse caused by torsion of the pedicle." It is given to few men to deserve the triple praise due to pathological sagacity, surgical boldness, and originality.

In 1883, when the first blow had already been struck at his health, he published a series of lectures on the "Comparative Physiology of Menstruation." He was always given to visiting the Zoological Gardens, and he turned to account the opportunities there afforded to study the habits and physiology of the animals. The knowledge so acquired was extended by observations made in the country, to which his shattered health often compelled him to retreat. These lectures constitute the most original and instructive accession to our knowledge of menstruation—a function which lies at the foundation of gynæcology—that has appeared in this generation. We cannot in this place attempt an adequate analysis of it. The leading theme is to illustrate and accentuate the general law insisted upon by Darwin, that Periodicity rules alike over the physical, animal, and vegetable worlds.

Dr. Wiltshire held various public appointments. First he became attached to the St. Mary's Hospital School as assistant-physician, and subsequently he was made physician to the out-patients and joint lecturer on obstetrics with Dr. Meadows. He was physician for diseases of women to the West London Hospital, and was for a short time physician to the Samaritan Hospital. He also held the post of physician to the British Lying-in Hospital. About four years ago symptoms of locomotor ataxy appeared. The significance of these symptoms became plain to his colleagues and immediate friends, although, with the hopefulness and tenacity of a sanguine nature, he battled against the enemy, refusing to yield. And more than once his resolution seemed to have conquered. But the remissions inspired little confidence in anyone but himself, and at last body and mind gave way. In the summer of 1885 he resigned his appointments and the hope of resuming practice. He had married a daughter of the late Mr. Albert C. Waterlow, thus becoming the brother-in-law of Dr. Ferrier. His widow and two sons survive him.

De mortuis nil nisi bonum. We need not hesitate at the qualification: *nisi verum.* What is true of him is mostly good. He had a warm heart for his friends. If he at times exhibited some jealousy, tinged even with bitterness towards those who he thought opposed his progress, the failing will be explained and pardoned by the reflection that it is not uncommon in men who have been forced to struggle hard in early life; and who, in their impatience to succeed, are apt to be irritated by opposition which they feel is undeserved. And those who knew him best would trace not a little of his asperity to the disease which was insidiously sapping his nervous centres. At any rate, Alfred Wiltshire leaves behind him sterling work enough that will endure, bearing no trace of ungenerous feeling.

THOMAS WALKER, M.D., J.P.

DR. THOMAS WALKER, who died at Peterborough on the 16th inst., was born in Dumfriesshire in September, 1796, and was therefore in his ninety-first year. He had been for seventy-one years a qualified member of the medical profession, having become a licentiate of the Edinburgh College of Surgeons in 1815. At the time of his death he was the oldest licentiate of that College, and also father of the Faculty of Physicians and Surgeons of Glasgow. The oldest son of the late Josiah Walker, M.A., Professor of Humanity (Latin) in the University of Glasgow, Dr. Walker was descended from a long line of ministers eminent in the Scotch Church, his ancestor in the seventh generation being that most celebrated of sixteenth century Scotchmen, the great reformer, John Knox. In stature tall, square-built, muscular, with a countenance expressive of strong individuality, endowed with abilities far above the average, courteous, honourable, and just to everyone, he was physically, intellectually, and morally a notable man. Most hospitable, highly educated, of refined tastes, his mind stored with accurate and widely-ranging information, his society and friendship were at all times highly valued by those of all classes and ages with whom he was brought in contact. He was especially fond of associating with men younger than himself, and, as was remarked by us of him in our memoir of his pupil, the late Dr. Harry Leach, he was "a physician who had been peculiarly fortunate in the number of honoured and successful men trained by him for the profession." Although Dr. Walker was, in his own town and district generally, universally esteemed and regarded with strong personal affection, it was given perhaps to only a privileged few to know the almost feminine tenderness of heart which lay beneath the somewhat austere exterior.

Dr. Walker studied in Edinburgh, and qualified at the earliest possible date with a view to entering at once on active medical service in the army; but the battle of Waterloo and the subsequent general peace defeating this ambition, he went to Paris, and there, under Roux, Dupuytren, Dubois, Larrey, and other eminent surgeons (of whom he wrote in letters still extant life-like descriptions), continued his medical studies. On his return from the Continent he became house-surgeon to the Westminster Hospital, and at the same time attended the School of Medicine in Great Windmill-street. Thus specially qualified for the practice and teaching of surgery, Mr. Walker returned to Glasgow, intending to become a candidate for the Chair of Surgery which was shortly to become vacant. The success of his candidature was considered certain, but an attractive offer of a practice at Peterborough induced him to change his plans. He commenced practice at Peterborough in 1819, and the Chair of Surgery, on becoming vacant, was filled by his most intimate friend, Professor James Laurie. Mr. Walker speedily acquired the confidence alike of his medical brethren and the public, and was appointed the first surgeon to the Peterborough Infirmary—an office which he held for forty-three years.

In 1843, Mr. Walker added to his other qualifications that of M.D. of Edinburgh. Dr. Walker was a most successful surgeon, and although he himself wrote but little, the first hints of many a step in modern surgery are to be found in the note-books of the young men who were from time to time either his private pupils or house-surgeons to the Peterborough Infirmary. In his operations, as in all else he did, there was an utter absence of attempt at display. Thorough anatomical knowledge, a skilful hand, a clear judgment, and a cool temperament ensured success. He was an excellent lithotomist, and operated eighteen times successfully before losing a case. Fond of mechanics, and himself a practical adept, he continually devised new surgical appliances and methods of treatment. As a physician Dr. Walker was no less successful than as a surgeon, early discarding the indiscriminate and empirical use of remedies. He continued in full practice until the year 1876, when a severe illness laid him aside for some months, and he never resumed active work. He was a Justice of the Peace for the Peterborough division of the County of Northampton, and for some forty years served as an active and efficient magistrate, filling also various public offices, until partial deafness made him doubt his own capacity for business. He leaves fifty-five direct descendants, of whom two sons and a grandson are members of the profession. An early riser, temperate in his habits, taking pleasure in strong physical exercise, he occupied his leisure in gardening, carpentering, and drawing. He was a great reader, and retained his vigour of intellect and body almost to the last. When in his eightieth year, he, with his friend Mr. O'Connor of March, Cambs., went at night on foot across a fen drove and fields too bad for wheels, and in a cottage by the light of a tallow candle performed herniotomy.

The funeral took place on the 21st inst. at Peterborough, amid every sign of respect from the inhabitants.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a recent meeting of the Court of Examiners, the following was admitted a Fellow of the College:—

Joseph Byrne.

SOCIETY OF APOTHECARIES.—The following gentlemen passed the examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Dec. 23rd:—

Barton, G. A. Heaton, Wenlock House, Burton-road, Kilburn.
Bidwell, Leonard Arthur, Lee-terrace, Blackheath.
Blenkinsop, Alfred Percy, Hilldrop-crescent, N.
Carvalho, Alberto Pedro de, M.R.C.S., Lidlington-place, Ampthill-square.
Fox, Geo. Martin, Oxford-street, Bilston, Staffordshire.
Harris, Edward Bernard, Alkham-road, Stoke Newington.
Hensley, Philip Henry, Colcherne-road.
Phillips, Thomas, Newcastle Emlyn, South Wales.
Slater, William Arnison, Green-lanes.
Vidler, Albert Edward, Magdala House, Rye, Sussex.

Passed on the 30th ult.:—

Cook, Edward Thomas, M.R.C.S., Southsea.
Jong, Edward Meyer de, Blackpool.
Walls, James, Wigan.

SCARLET fever is reported to be spreading rapidly in the locality of Treharris.

A LEGACY of £200, free of duty, left to the Leeds Infirmary by the late Mr. William Neal, has recently been paid over to the treasurer of that institution.

THE QUEEN'S JUBILEE is to be recognised at Bristol by the founding of a Maternity Hospital, and at Folkestone by the erection of a public hospital.

MEATH HOSPITAL, DUBLIN.—It has been determined by the governors to build a special ward, to be called the "John Barber Ward," as a token of appreciation of the late Mr. Barber's generosity.

ON the 21st ult. a property owner at Ramsgate was summoned for neglecting to connect his property with the sewers. The magistrates ordered the nuisance to be abated.

A ROMAN Catholic Home for Female Inebriates was formally opened at Hammersmith on the 21st ult., the premises recently occupied at Kilburn having proved unsuitable.

AN inquest was held at Sutton Coldfield on the 23rd ult., on the body of Mr. Charles Barlow, surgeon, whose death occurred suddenly on the 21st. Medical evidence having been given to the effect that death had resulted from syncope, the jury returned a verdict accordingly.

KILMARNOCK FEVER HOSPITAL AND INFIRMARY.—The annual meeting of the subscribers to this institution was held on the 16th ult. The annual report showed an income for the year of £1521 and an expenditure of £1528, which, with the deficit of previous year, left a balance due to the bank of £349. The invested capital amounts to £5605.

AT a meeting of the Board of Management of the Manchester Royal Infirmary on the 28th ult., it was resolved that one of the wards of the Institution be named the "Thomas Rose Ward," to perpetuate the name of Alderman T. Rose, from whom the hospital recently received a munificent legacy.

PROSECUTION UNDER THE FOOD AND DRUGS ACT.—At the Dale-street Police-court, Liverpool, last week two grocers were fined each 10s. and costs for selling adulterated pepper. The foreign ingredient—a mixture termed "poivrette," which was found in one case to the amount of 65 per cent., and in the other to 55 per cent.—appeared to consist of ground nutshells and olive-stones.

AT the Greenock Police-court, on the 18th ult., a lodging-house keeper was fined 10s., with the option of going to prison for seven days, for neglecting to report to the sanitary inspector the presence on her premises of a child who was suffering from enteric fever, although she had been warned to do so by a medical man.

"THE VALUE OF ANALYSIS."—Dr. Thomas Stevenson has sent in his resignation of the office of analyst for Bedfordshire in consequence of the Town Council having tacitly declined to take any further action in respect of the late dispute regarding the analysis of a sample of beer. The resignation has been accepted.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

DUNLOP, G. H. MELVILLE, M.D., M.R.C.P.E., has been elected an Extra Physician to the Royal Edinburgh Hospital for Sick Children.

DUTT, A. C., B.A.Cantab., L.S.A., has been appointed Resident Medical Officer to the Morpeth Dispensary.

DOUTY, JOEL HARRINGTON, M.R.C.S. (late Senior Assistant Medical Officer to the Worcester County Asylum), has been appointed Medical Superintendent of the Berks County Asylum, vice R. B. Gilland, M.D., resigned.

HOVELL, DENNIS DE BERDT, F.R.C.S.E., has been appointed Consulting Surgeon to the London Orphan Asylum, Watford, Herts.

HUDSON, LEOPOLD, M.R.C.S., L.R.C.P. Lond., has been appointed Pathologist and Curator of the Museum to the Middlesex Hospital.

HURLBUTT, SPENCER, M.R.C.S., L.R.C.P.Lond., L.S.A., has been appointed Assistant Medical Superintendent and Dispenser to the Fulham Union Infirmary, Hammersmith, W., vice H. Bamber, M.B., C.M., resigned.

LLOYD, JOHN JENKIN, L.R.C.P., &c., has been appointed Medical Officer to the Prince of Wales Lodge of Oddfellows, Llanelly.

LOCKE, GEORGE, M.R.C.S., L.R.C.P.Ed., L.S.A., has been appointed Medical Officer to the Dalston and Haggerstone Branch of the Metropolitan Provident Medical Association, vice Towne, resigned.

MORGAN, WILLIAM PRINGLE, B.A., M.B., B.Ch. Univ. Dub., has been appointed Medical Officer and Public Vaccinator to the Seaford District of the Eastbourne Union, vice Buckmaster J. Tuck, M.R.C.S., L.S.A., J.P., deceased.

PEARSON, RICHARD, M.R.C.S., L.R.C.P.Lond., has been appointed Junior Assistant House-Surgeon to the Hull Royal Infirmary.

PRAEGER, E. A., L.F.P. & S.Glas., L.S.A., has been appointed Surgeon to the Vancouver Coal Company's Collieries at Nanaimo, British Columbia.

Births, Marriages, and Deaths.

BIRTHS.

CARTER.—On the 24th ult., at Dilkusha, Lucknow, the wife of Surgeon-Major Sidney H. Carter, M.B., Army Medical Staff, of a daughter.

MACLEHOSE.—On the 17th ult., at The Croft, Sevenoaks, the wife of Norman M. MacLehose, M.B., of a son.

MEYERS.—On Nov. 16th, at Rushworth, Victoria, Australia, the wife of Herbert Henry Meyers, M.R.C.S., L.R.C.P., of a son.

PIGEON.—On the 25th ult., at 6, Albion-street, Hull, the wife of Henry W. Pigeon, M.A., M.B., B.C., F.R.C.S., of a son.

PLATT.—On the 15th ult., at St. James's Lodge, West Hampstead, the wife of William H. Platt, L.R.C.P.Ed., L.R.C.S.I., of a daughter.

MARRIAGES.

HUNTINGTON — BOWLES.—On the 15th ult., at St. Mary's, West Kensington, William Huntington, M.R.C.S., L.R.C.P.Lond., to Charlotte MacLeod, daughter of Joseph Bowles, Esq., late of Sydenham.

MERCES—ROW.—On the 15th ult., at the Parish Church, Stoke Damerel, by the Rev. W. H. Allin, James Merces, M.R.C.S., L.R.C.P.Lond., of Drayton-park, Highbury, to Florence Everard, seventh daughter of the late Fred. Row, M.D., J.P., of Devonport.

MORTON—HALL.—On the 16th ult., at St. Paul's Church, Edinburgh, John Morton, M.D., L.R.C.S., L.R.C.P., to Agnes, only daughter of the late John Hall, Esq., of Birmingham.

MURRAY—MATHESON.—On the 29th ult., at 25, Abercromby-place, Edinburgh, by the Rev. Alexander Whyte, D.D., Free St. George's Church Edinburgh, assisted by the Rev. Donald Murray, Free Church Tarbat, Ross-shire, father of the bridegroom, Donald Roderick Murray, M.B., C.M., Admiralty Surgeon and Agent, Leith, to Johanna (Bunty), daughter of the late Robert Matheson, Esq., of H.M. Board of Works, Edinburgh.

REEKS—THORNTON.—On the 23rd ult., at the Cathedral of the Holy Trinity, Gibraltar, by the Ven. Archdeacon Govett, assisted by the Rev. D. Nickerson, Chaplain to the Forces, John Reeks, M.R.C.S.E., &c., of Forest-gate, Essex, to Mary Rose, elder daughter of Henry Thornton, Esq., of Ashtead Cottage, Gibraltar.

DEATHS.

BELL.—On the 14th ult., at his residence, Merlin, Eastbourne, William Bell, M.D., L.R.C.S.I., in his 83rd year.

DICKINSON.—On the 27th ult., at 102 Bedford-street, Liverpool, Annie, the beloved wife of Edward H. Dickinson, M.A.Oxon., M.D.

GREAVES.—On the 10th ult., at Burton-on-Trent, George Greaves, L.S.A., in his 82nd year.

GROVER.—On Christmas Day, suddenly, at St. Anne's, Lewes, John Pollington Grover, M.R.C.P.Ed., M.R.C.S., L.S.A., aged 38.

NANKIVELL.—On the 24th ult., at Ashley Lodge, Torquay, Chas. Benjamin Nankivell, M.D., aged 81.

TAYLOR.—On the 17th ult., at 5, Ashley-road, Bristol, Frank Taylor, M.R.C.S., L.S.A., late of Redcliff, Bristol, aged 30.

TRAILL.—On the 10th ult., at North-street, St. Andrew's, Fife, William Traill, M.D., of Woodwick, Orkney, aged 68.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, January 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesdays, same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. J. Langdon Down: On some of the Mental Affections of Childhood and Youth (Lettsomian Lecture).

Tuesday, January 4.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 1.30 P.M. Skin Department, Mondays and Thursdays, 9.30 A.M.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Dewar: The Chemistry of Light and Photography (adapted to a juvenile auditory).

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.—4 P.M. General Quarterly Meeting. Mr. Tudor Trevor: The prevailing Indifference to Inebriety.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting for election of Officers and Council. Mr. Eve: Multiple Cavernous Angeiomata in Deformed Leg.—Dr. Griffith: Extra-uterine Fœtation.—Mr. Butlin: Melanotic Sarcoma of Breast.—Dr. Carrington: A case of Recovery from Tubercular Meningitis.—Dr. Wiglesworth: Peripheral Neuritis in Raynaud's Disease.—Dr. Bruce Clarke: Subperitoneal Rupture of Bladder. Card Specimens:—Mr. Targett: Congenital Deformity of Lip.—Mr. Eve: (1) Multiple Painful Lipomata of Arms; (2) Diffuse Unilateral Papilloma of Tongue.—Mr. Charters Symonds: Hydatid of the Breast.

Wednesday, January 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesdays and Thursdays, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; and on Friday, 2 P.M.; and Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, January 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Dewar: The Chemistry of Light and Photography (adapted to a juvenile auditory).

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. T. Morton: The Analogy between Croup and Asthma.—Dr. Goodhart: Cases of Peritonitis.—Dr. Blenkinsop: Some remarks on Cancer and its Treatment.

Friday, January 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Dr. Blenkinsop: Phthisis and its Treatment.—Dr. Seymour Taylor: The Etiology of Phthisis, and its Treatment from a Hygienic Standpoint.—Mr. Bruce Clarke: The Operative Treatment of Intercurrent Disease in Phthisical Patients.—Mr. H. Percy Dunn: Card Specimens of Pulmonary Tuberculosis.—Dr. P. S. Abraham: Specimens of the Tubercle Bacillus, and Microscopical Sections of Tubercular Organs in Man and the Lower Animals.—Messrs. Wright and Co.: An Exhibition of Oro-nasal Inhalers, Sprays, and Instruments.

Saturday, January 8.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Dewar: The Chemistry of Light and Photography (adapted to a juvenile auditory).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 30th, 1886.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 24	29·63	W.	40	39	...	46	37	...	Overcast
,, 25	29·94	W.	39	37	...	42	34	·33	Fine
,, 26	29·90	E.	40	39	...	41	34	...	Raining
,, 27	29·75	N.	36	35	...	41	33	1·04	Overcast
,, 28	29·88	W.	40	40	...	42	34	...	Overcast
,, 29	29·89	W.	40	38	...	44	35	...	Overcast
,, 30	30·30	N.E.	34	33	...	...	32	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

HEALTH OF THE UNITED STATES ARMY.

THE annual report of the Surgeon-General of the United States Army for 1885 shows that the American soldiers, like the greater part of the rest of the world, were unusually healthy during that period. The actual number of admissions to sick was 32,990, or 3839 less than for the preceding year. Compared with the average rate for ten years preceding, the admissions were about one-fifth less. A greater proportion of invalids was furnished by troops under thirty-one years of age, while up to the age of twenty-five the rate proved so much above the mean for the whole army that the Surgeon-General states it may be fairly questioned whether the services rendered by these young men are equal to the cost of their maintenance. Men of Irish birth furnished the highest mortality rate, or 7·9 per 1000; the English stood next, and the Germans third.

H. W. Verdon, M.D., and *W. Gibson Bott, L.R.C.P., M.R.C.S.*—Our correspondents' letter arrived too late for publication this week.

Mr. E. M. Harwood is thanked.

VACCINE LYMPH IN TROPICAL CLIMATES.

To the Editors of THE LANCET.

SIRS,—At the request of Bishop Smythies in E. Central Africa—lat. 4° to 15° S.—I would ask you to give me space in your columns to solicit information as to the best way of preserving and transmitting vaccine for use in that tropical climate. We send out quantities every month, and have tried various kinds, and also methods of storing. The mail is monthly only, and the voyage is twenty-eight days to the nearest port, with a fortnight further on the inland journey to our stations. Only quite a small percentage is any good on arrival. If any of our home authorities can help us to discover the right kind and method it will be a great boon, and of public advantage.

It may interest your readers to know that Archdeacon Foster, in lat. 5°, has lately vaccinated thousands by means of several assistants and one qualified medical man. He has kept a district round his stations free from small-pox, whilst the belt of the country just beyond is badly troubled with the disease. I will gladly give further information to any who care for it.

I am, Sirs, yours faithfully,

The Universities' Mission to Central Africa, Delahay-st., S.W., Dec. 20th, 1886. WM. H. PENNEY.

*** If lymph has to be kept for a long period, it is best preserved in sterilised tubes, and should be stored in the icehouse of the vessel conveying it to its destination. The cultivation of vaccine lymph at the place where it will be used gives a better promise of success than its transmission from England.—ED. L.

THE MOST EXTENSIVELY QUOTED MEDICAL JOURNALS IN THE WORLD.

To the Editors of THE LANCET.

SIRS,—A short time ago I had the curiosity to count the number of extracts from foreign sources in some Russian journals which are remarkable for their copious and impartial *précis* writing from the medical journals of all other countries. The numbers were as follows:—THE LANCET, 12; *Brit. Med. Jour.*, 7; *La Semaine Méd.*, 7; *Deutsche Med. Zeit.*, 3; *Centralbl. für Chir.*, 3; *Med. Press*, 2; *Journ. of Cut. and Vener. Dis.*, 2; *La France Méd.*, 2; *Centralbl. f. Nervenheilk.*, 2. Besides these, there were single extracts from 1 English, 4 American, 1 Canadian, 6 French, 9 German, and 3 Italian medical journals. Again, I have just counted the quotations from non-Russian journals in the last four numbers of the *Vrach*, with the following results:—THE LANCET, 11; *Brit. Med. Jour.*, 7; *Münchener Medicin. Woch.*, 11; *Allgem. Med. Cent. Zeit.*, 8; *La Semaine Médicale*, 8; and a large number of other English, American, German, French, and Italian medical journals from 1 to 4 each. This all tends to show that though our English medical journals are less numerous than those of several other countries, our great weeklies are extensively read and appreciated abroad. *A propos* of weeklies, it is not, I suppose, generally known that there is in existence one (and one only, as far as I can learn) daily medical journal. I have before me a copy of *El Diario Médico-Farmaceutico*, published at Madrid; but I cannot say that I feel any longing for the time when it shall be imitated in England. There is more valuable and original matter in one number of THE LANCET than would probably be found in a whole year's issue of the *Diario*.

I am, Sirs, yours truly,

Woolwich, Dec. 22nd, 1886. THEODORE MAXWELL.

An Intending Candidate will find the information he desires in our last Students' Number, published in September, 1886.

THE RIDDELL FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly insert the enclosed list of subscriptions to the above fund, and oblige,

Yours truly,

Dec. 29th, 1886. J. WICKHAM BARNES.

Amount stated in the last issue of THE LANCET		£3	13	0	J. E. Whidborne, Esq.	£3	0 0
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					— Pattinson, Esq.	0	10 0
					W. C.	0	2 6

H. (Colwich).—Our correspondent will find sufficient information in a little work on Diabetes by Dr. Philpot, published about a year ago.

PERSISTENT DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—I recently had a case similar to the one described by your correspondent, "A. H.," in your last issue (p. 1209), but of so much more severe a type as to bring the patient in the course of two years into a condition of extreme prostration and emaciation. My patient—also a young lady—consulted me about six months ago, and she is now quite well. I prescribed the perchloride of iron in four-minim doses, and hydrochloric acid in ten-minim doses, after meals. The diet ordered was one of milk and farinaceous foods, at regular intervals of four hours only. When the diarrhœa had considerably abated and the patient was beginning to put on flesh, massage was used, on the recommendation of Dr. Whitehead of Manchester, with the effect of rapidly restoring the patient's flesh and strength.

I am, Sirs, your obedient servant,

Clayton-le-Moors, Dec. 22nd, 1886. C. R. ILLINGWORTH, M.D.

MATERNAL IMPRESSIONS.

To the Editors of THE LANCET.

SIRS,—Some difference of opinion exists in reference to the influence of maternal impressions on the formation of the fœtus in utero. The following case will at least show a reasonable *propter hoc*.

Mrs. D——, aged thirty-eight, was delivered of her first child minus one hand, the left forearm terminating at the wrist in a perfect stump. I questioned her directly after delivery as to any impression she may have received during pregnancy; but she could call none to mind. The next day, however, she remembered that two men presented themselves at the bar of an inn, of which she was then landlady, and showed her that they had each lost a hand in some accident. At the time, she said, it gave her "quite a turn." She was then in about her second month of pregnancy. It is a curious coincidence, if nothing more.

I am, Sirs, yours obediently,

Dec. 13th, 1886. J. G. BRADEN, M.R.C.S., L.S.A.

COMPLAINT AGAINST A PHYSICIAN IN JAMAICA.

A CORRESPONDENT writes reflecting on a medical practitioner for not responding to the call of a lady in her labour, on the ground that he was going to devote himself to black and brown women who appeared to appreciate him more. It is asserted that the physician in question was the family attendant, and that in consequence of his refusal, of which he had given no notice, the labour became protracted and complicated. We do not think that this can be a complete statement. It is incredible that a physician engaged to attend a lady in her confinement would make such a frivolous excuse for not doing so.

Mr. Clark Bell (New York).—It will always be impossible to define insanity, because it is a *negative* quality. Like disease, insanity simply means unsoundness. It is only in respect to special forms of disease or unsoundness there can be definitions.

M.D. Edin. will see by reference to our issues of Dec. 18th and 25th, pp. 1208, 1257, that the matter has been already noticed.

A PLAN OF CASE-MAKING.

To the Editors of THE LANCET.

SIRS,—Since entering into practice it has always been my wish to keep notes of every case treated; but I have found this very difficult to do, partly from want of time, and partly from want of a convenient method of taking and keeping the notes. After trying a great many plans I arranged, about a year ago, a case-sheet with convenient headings, and had a number printed. These I have used during the present year, and have found them very convenient. The cases being entered on loose sheets, it is easy to write them up at odd moments; the subdivisions make the writing of them more rapid, and the arrangement of them in portfolios renders reference to old cases easy. The sheets have the usual heading, with spaces for name, address, age, occupation, disease, result, date; also spaces for a letter and a number. The former is filled in with the initial of the surname, the latter with the number the case occupies amongst those of the same letter. Thus if the name is Smith, and it is the tenth case commencing with S, notes of which have been taken, the case-sheet is endorsed—Letter S, No. 10. On the first page, under the heading, are spaces for family history, personal history, present condition, and advice and treatment. The second page is occupied with progress of case, whilst the third and fourth pages are utilised either for diagrams, charts, or for any particulars which have to be given more fully than the first and second pages admit of. The sheets as filled are placed in a portfolio, which has separate compartments for each letter. Thus, if it is wanted to look up the case of Smith, it is only necessary to take the case-sheets out of compartment S. There are also compartments for unfilled case-sheets, blotting-pad, and diagrams and charts. The label outside the portfolio shows the period of time covered by the sheets within. I showed a specimen to Messrs. Danielsson and Co., London, and they have undertaken the publication of the case-sheets and portfolios.

I am, Sirs, yours faithfully,

December, 1886. B. MACDOWEL COSGRAVE, M.D.

CONSULTANTS.

To the Editors of THE LANCET.

SIRS,—Is it usual for a consultant in London to write a reply, direct a patient, advise and prescribe, asking and taking a guinea fee, when the patient is under the care of the ordinary family attendant, and when that gentleman has been in communication on several occasions with the said consultant in this particular case?

I am, Sirs, yours faithfully,

December, 1886. M.D.

*** The above action on the part of the consultant is not usual, and cannot be commended.—ED. L.

MEDICAL BURSARIES.

To the Editors of THE LANCET.

SIRS,—In your issue of Oct. 30th I see that some of our old graduates do not forget their *alma mater* even when far away. It is to be hoped that more will follow Dr. Gunning's example in founding bursaries for graduates of the University. There is only one thing that I, as an old university man, regret, and that is that the names of Syme and Spence were omitted in denominating the different bursaries. "Honour to whom honour is due," and no two men together ever did more, in my humble opinion, for clinical and practical teaching than those two.

I am, Sirs, yours faithfully,

Uniondale, Cape Colony. JOHN BROWN, M.B.

DEGREES FOR LONDON MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—I have been rather surprised at the seeming apathy of the London medical students with regard to the movement which has been, and is being, made in their favour. I refer, of course, to the scheme for granting degrees in place of the present double qualification. As the present movement concerns all London medical students, does it not seem strange that they have never held a meeting among themselves to pass resolutions which would serve to strengthen the hands of those agitating on their behalf.

I am, Sirs, yours truly,

Dec. 27th, 1886. STUDENT.

ACTION BY A MEDICAL MAN AGAINST AN INSPECTOR OF THE POOR AT KIRKWALL.

WE are glad to see that the judge expressed his sense of the "technical, not to say harsh," way in which the Board of Birsay had treated their medical officer in terminating one engagement, without notice, to put him upon lower and less advantageous terms. The judge thought the board should pay their own expenses.

Mr. H. Anderson.—The observations which were made upon the Llandudno Cottage Hospital in our issue of Dec. 11th, 1886, were based upon the last report, issued that year, and also on a comparison between that and the one for the previous year.

G. P.—There is no invariable rule. It is better to follow the custom that has been in vogue in the locality.

T. P. R.—The question is discussed pretty fully in our present number.

EPITHELIOMA OF THE LIP REMOVED BY THE AID OF COCAINE.

To the Editors of THE LANCET.

SIRS,—Perhaps the following case of epithelioma of the lower lip, removed by the aid of cocaine, may interest some of your readers.

A man came to me a few days ago with a growth on his lower lip. It had been there for some time, but within the last month had rapidly increased in size. On examination I found it to be an epithelioma, and decided to remove it. He objected to the administration of chloroform; so I injected on either side of the growth a 4 per cent. solution of cocaine, and dusted the mucous membrane of the lip with hydrochlorate. After waiting ten minutes I removed the growth, and such was the good effect of the cocaine that I was enabled to take time and perform the operation with great exactness. The man expressed himself as feeling no pain, and the after progress was excellent.

I am, Sirs, yours truly,

Leighton Buzzard, Dec. 13th, 1886. JOHNSTONE HARRIS.

Dr. Glazier.—The Swiss authorities will not allow a foreigner to practise even amongst his own countrymen in Switzerland without passing the State examination at Bern or Geneva; and this is by no means a mere matter of form.

Caligraph.—Our correspondent should consult his ordinary medical attendant. We do not give advice.

J. R.—We regret we cannot satisfy our correspondent. The data for a reply are wanting.

E. S. had better address the author named.

INCOME-TAX ASSESSMENT.

To the Editors of THE LANCET.

SIRS,—Will you allow me to suggest to your readers who may be dissatisfied with their income-tax assessment that they should apply to the Income-tax Repayment Agency, 16, Artesian-road, W. Acting upon advice received therefrom I have lately recovered £7 8s., and obtained a lower assessment. I am, Sirs, yours faithfully,

December 24th, 1886. S. W.

Viator.—So far as we are aware, Dr. Fattorini is the latest Italian writer on the probable causes of enteric fever in Rome. That author, in a comparatively recent essay, laments the abolition of the old cloacæ, and attributes the existence of typhoid in the Eternal City to the introduction of the English watercloset system.

R. C.—Such breaches of good taste are often to be attributed to the enthusiasm of injudicious friends.

ACTION OF DRUGS IN ALBUMINURIA.

Dr. Robert Saundby writes, in reference to our annotation on this subject last week, that the solution of bitartrate of potash employed was *half an ounce* to a pint, not an ounce and a half, as there stated.

J. C. is referred to our advertising columns.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Andrew Clark, London; Mr. Savory, London; Mr. T. P. Teale, Leeds; Dr. N. Kerr, London; Mr. Barlow, London; Dr. Elliott, Andover; Dr. W. Pearce, London; Dr. J. Williams, London; Mr. Harrison, Clifton; Mr. Wigmore, London; Mr. Fernandez, Perim; Messrs. Mottershead and Co., Manchester; Mr. A. Jackson, Sheffield; Messrs. Harris and Co., Birmingham; Mr. Cowan, Glasgow; Mr. McGruer; Dr. Wesley Mills, Montreal; Mr. O'Neale, St. Leonards-on-Sea; Messrs. J. and H. Grace, Bristol; Mr. Patwardhana, Poona; Mr. Clark Bell, New York; Mr. Spitzly, Paramaribo; Mr. Boyd, Wandsworth; Mr. Martyn Clark, Amritsar; Mr. Tower, Ipswich; Mr. S. N. Bruce; Mr. Burgess, Manchester; Mr. Somerville, Edinburgh; Mr. Grimsley, St. Asaph; Mr. Leighton, Cheltenham; Mr. Affleck, Manchester; Messrs. Battle and Co., London; Mr. Denman, Beaconsfield; Messrs. Howlett and Son, London; Mr. Somerville, Lenham; Mr. Logan, Newcastle-on-Tyne; Mr. Donald, Inverness; Dr. Lucas, Notting-hill; Mr. Parry, Bagillt; Mrs. Hill, Salford; Mr. Spiers, Tottenham; Dr. Bower, Bedford; Mr. Weir, Hanley; Mr. H. W. Freeman, Bath; Mr. Wickham Barnes, London; Prof. Tricomi, Naples; Mr. Newington; Messrs. Lee and Nightingale, Liverpool; Mr. W. Coates, Manchester; Dr. Sinclair White, Sheffield; Dr. Murphy, Sunderland; Messrs. Macalister and Co., Liverpool; Dr. Percival Hunt; Mr. Burns, Ipswich; Dr. Mair, Bayswater; Dr. Fitzsimons, Bayswater; Mr. Hill; Messrs. Slater and Co., Accrington; Dr. Buckle, Storrington; Mr. Wheeler, Manchester; Mr. Mackney, Oban; Mr. Craske, Kentish-town; Dr. Gresham, Los Angeles; Mr. Murlin, Sutton; Dr. Piesse, Fulham; Dr. Dale, King's Lynn; Mr. Etherington, Ipswich; Mr. Birchall; Messrs. Oliver and Boyd, Edinburgh; Mr. Hopkinson, Notts; Mr. Grayling, Forest Hill; Mr. F. Page, Newcastle-on-Tyne; Messrs. Burgoyne and Co., London; Mr. Wesley Mills, Montreal; Delta, Gallaboola; Experientia docet; Principal, Kew; L.R.C.P.; General Practitioner; Justitia; S. W.; M.D.; Scaphoides; Surgeon.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Laffan, Cashel; Dr. Caird, Lochgoilhead; Mr. Poole, Maldon; Dr. Taylor, Bristol; Dr. Smart, Bombay; Mr. Pickles, Leeds; Dr. Castle, Cape of Good Hope; Mr. Lay, Northampton; Dr. Hickey, Auburn, New York; Dr. Row, Highbury; Dr. Heelas, Bonchurch; Dr. Spicer, North Molton; Mr. Gibson, London; Mr. Hoare, Birmingham; Mr. Ricker, St. Petersburg; Mr. Unsworth, Liverpool; Dr. McHeath, Wickham Market; Mr. G. Lawson, London; Mr. Pearce, Lewes; Dr. Waters, Liverpool; Mr. Gibbon, London; Mr. Bowser, London; Dr. Winslow, Hammersmith; Mr. Griffiths, Lampeter; Dr. Newell, Macclesfield; Mr. Churchill, Carnforth; Mr. Gell, Macclesfield; Dr. Owens, Long Stratton; Mr. Beaumont, Kentish-town; Miss Larritt; Messrs. Lee and Martin, Birmingham; Dr. Gresham, California; Mr. Plummer, Thame; Dr. Eberle, Thirsk; Mr. Spicer, Tottenham; Mr. Hacker, Belfast; Mr. Pigeon, Hull; Dr. Davies, Wrexham; Mr. Williams, Macclesfield; Isabella Horrocks, Philadelphia; F. M., Liverpool; B. C.; Medicus, York; Cantab.; H., Brighton; Surgeon, Halifax; Alpha, Eastleigh; C. W.; L. S. C.; S. B., Kinnetey; D. B., Newcastle-on-Tyne; J. M., London;

Staffordshire Sentinel, Liverpool Courier, Advocate of India, Montreal Daily Herald, York Herald, Birkenhead Weekly Albion, &c., have been received.

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